

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS
2-BARREL BOX CULVERT
REPLACEMENT

FAP 349 / US ROUTE 30
OVER DITCH (1.5 MI. SOUTH OF 111th ST.)
SECTION 15 T-1

WILL COUNTY
C-91-215-09

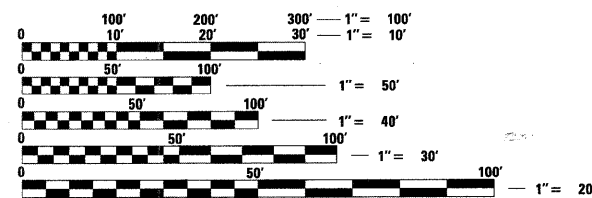
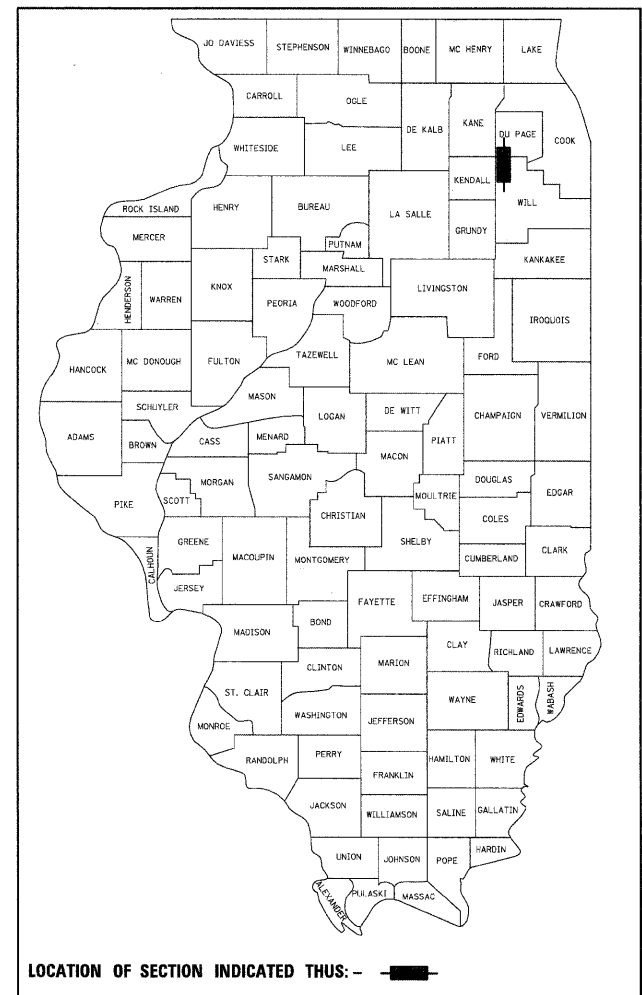
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60F69		

D-91-215-09

FOR INDEX OF SHEETS, SEE SHEET NO. 2

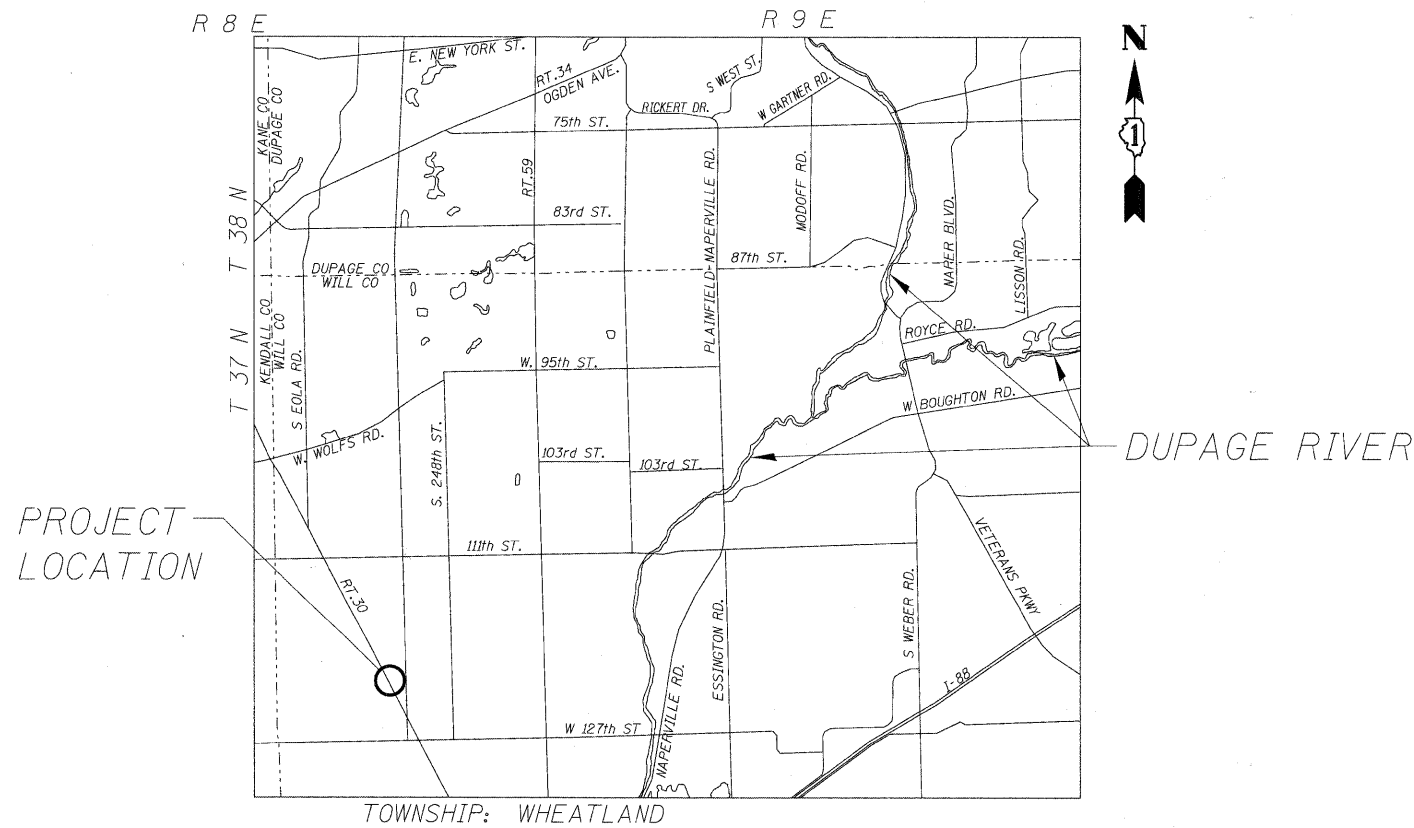
DESIGN DESIGNATION
MINOR ARTERIAL (URBAN)
ADT 14500 (2007)
SPEED LIMIT 50 MPH

THE PROPOSED WORK TO BE PERFORMED CONSISTS OF REMOVING THE EXISTING DOUBLE BARREL CULVERT AT STATION 267+59, AND REPLACING THE EXISTING STRUCTURE WITH A NEW 7'x3' DOUBLE-BARREL PRECAST CONCRETE BOX CULVERT UTILIZING PHASED DEMOLITION AND CONSTRUCTION. THE PROPOSED STRUCTURE NUMBER IS SN 099-0508.



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811



TOWNSHIP: WHEATLAND

LOCATION SKETCH

NET AND GROSS LENGTH OF PROJECT = 48' = 0.009 MI

PROJECT ENGINEER: REJENDRA C. SHAH (847) 705-4555
PROJECT MANAGER: CATHERINE KIBBLE (847) 705-4269

CONTRACT NO. 60F69

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED JANUARY 20, 2009

Diana M. Kibble
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

January 30, 2009
Charles G. Ingersoll
 ENGINEER OF DESIGN AND ENVIRONMENT

January 30, 2009
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

LONCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST., SUITE 222
 NAPERVILLE, ILLINOIS 60563 Ph: (630) 571-9100

STATE OF ILLINOIS
 WILLIAM H. REED
 REGISTERED PROFESSIONAL ENGINEER
 081-005150
 062-047827
 REGISTERED PROFESSIONAL ENGINEER
 081-005150
 Expires 11-30-10 Expires 11-30-09

STATE STANDARDS

SHEET NO. TITLE

1	TITLE SHEET
2	GENERAL NOTES, INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5	STAGING TYPICAL SECTIONS
6	CONSTRUCTION STAGING PLAN - STAGE 1
7	CONSTRUCTION STAGING PLAN - STAGE 2
8	PLAN AND PROFILE
9	TEMPORARY LIGHTING - GENERAL NOTES, INDEX AND SYMBOLS
10	TEMPORARY LIGHTING PLAN
11	TEMPORARY LIGHTING - DETAILS
12	TEMPORARY LIGHTING - DETAILS
13	PAVEMENT MARKING PLAN
14	EROSION CONTROL PLAN
15	GENERAL PLAN, ELEVATION AND INDEX
16	HEADWALL DETAILS
17	WINGWALL DETAILS
18	BORING LOG
19	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
20	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) (TC-11) HIGHWAY STANDARDS

SHEET NO. TITLE

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT REBARS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND CLASS D PATCHES
515001-03	NAME PLATE FOR BRIDGE
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701201-03	LANE CLOSURE, 2L, 2W DAY ONLY FOR SPEEDS > 45 MPH
701301-03	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701316-04	LANE CLOSURE 2L, 2W BRIDGE REPAIR FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-05	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATION OF TYPES A & B METAL POSTS (FOR SIGN & MARKERS)
780001-02	TYPICAL PAVEMENT MARKINGS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

GENERAL NOTES

1. ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM.
2. DIMENSIONS ARE IN ENGLISH UNITS UNLESS OTHERWISE NOTED.
3. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED).
4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
6. ANY REFERENCE TO STANDARDS IN THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT LISTED IN THE PLANS WITH THE LATEST NUMBERS.
7. DURING CONSTRUCTION OPERATIONS, LOOSE MATERIAL DEPOSITS THAT OBSTRUCT THE FLOW OF WATER IN DRAINING THE AREA SHALL BE REMOVED BEFORE THE END OF EACH WORK DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES (NEW AND EXISTING) SHALL BE FREE FROM ALL DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
8. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING PROPERTIES.
9. THE CONTRACTOR SHALL NOTIFY THE AREA TRAFFIC FIELD ENGINEER, DON CHIARUGI, AT (847) 741-9857 AT LEAST 72 HOURS PRIOR TO FINAL PAVEMENT MARKING INSTALLATION.
10. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
11. ALL UNBALLASTED TYPE I AND TYPE II BARRICADES SHALL HAVE TWO (2) SANDBAGS ON THE BOTTOM RAIL.
12. ALL WORK IS TO BE COMPLETED WITHIN XXXX. THE COMPLETION DATE FOR THIS CONTRACT IS XXX, 2009.

DESIGNED - MJY	REVISED -
DRAWN - ST	REVISED -
CHECKED - MJY	REVISED -
DATE - 01/16/2009	REVISED -

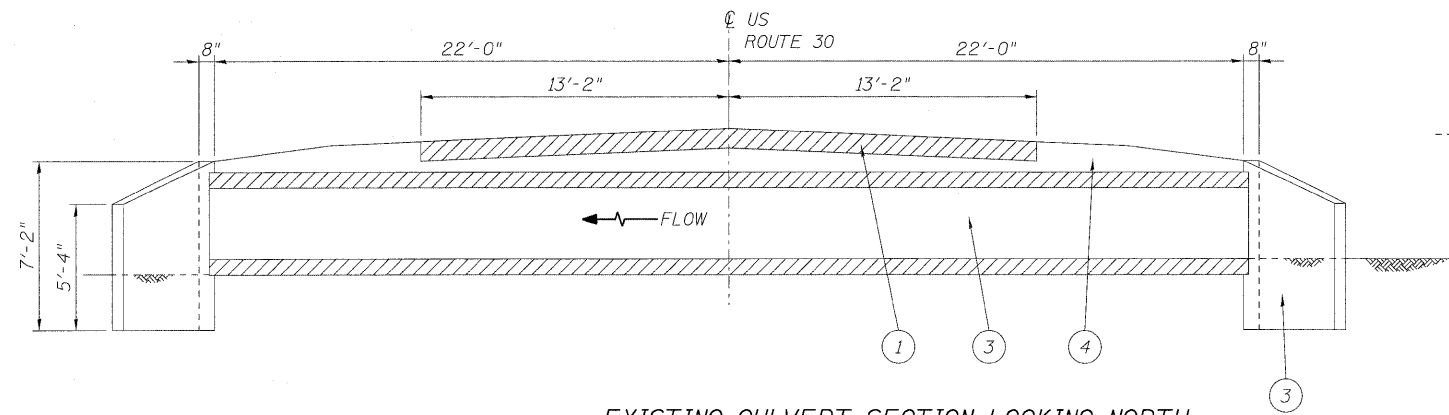
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	2
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

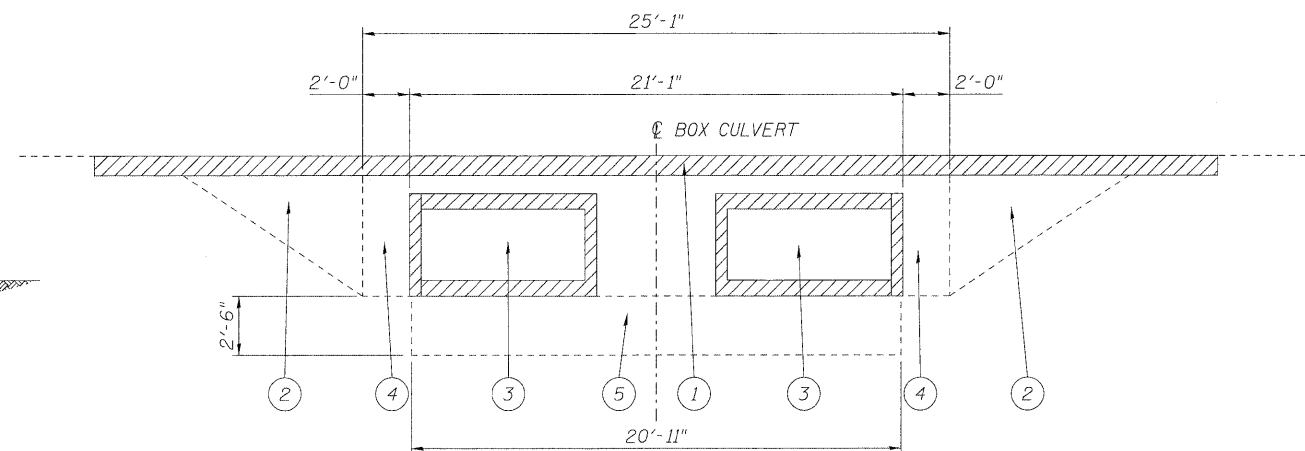
CODE NO.	ITEM	UNIT	TOTAL QTY.	100% STATE URBAN	
				ROADWAY 1000-2A	BX CULV. 1007
20200100	EARTH EXCAVATION	CU YD	116		116
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	115		115
21101815	COMPOST FURNISH AND PLACE, 4"	SQ YD	44	44	
25000310	SEEDING, CLASS 4	ACRE	0.10	0.10	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	1	1	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	1	1	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	1	1	
25100630	EROSION CONTROL BLANKET	SQ YD	44	44	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	1	1	
28000300	TEMPORARY DITCH CHECKS	EACH	2	2	
28000400	PERIMETER EROSION BARRIER	FOOT	60	60	
28100107	STONE RIPRAP, CLASS A4	SQ YD	26		26
28200200	FILTER FABRIC	SQ YD	48		48
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1	1	
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	140	140	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	140		140
50300300	PROTECTIVE COAT	SQ YD	11		11
50800105	REINFORCEMENT BARS	POUND	1975		1975
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	106		106
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	25.7		25.7
54010703	PRECAST CONCRETE BOX CULVERT 7'x3'	FOOT	92		92
67100100	MOBILIZATION	L SUM	1	1	
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6	
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1986	1986	
70300660	TEMPORARY PAINT PAVEMENT MARKING LINE 24"	FOOT	26	26	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	418	418	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	206	206	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4	
* 78200200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	17	17	
* 78200500	BARRIER WALL MARKERS	EACH	42	42	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	40	40	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	3	3	
* 81800320	AERIAL CABLE, 3-1/C NO. 4 WITH MESSENGER WIRE	FOOT	510	510	
* 83057350	LIGHT POLE, WOOD, 60 FOOT, CLASS 4	EACH	1	1	
84100110	REMOVAL OF TEMPORARY LIGHTING UNITS	EACH	4	4	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	50	50	
X0323002	TEMPORARY ELECTRIC SERVICE CONNECTION	EACH	1	1	
X0323003	TEMPORARY ELECTRIC SERVICE INSTALLATION	EACH	1	1	
X0324304	REMOVAL OF TEMPORARY WOOD POLE, SALVAGE	EACH	4	4	
X0325265	REMOVE ELECTRIC SERVICE	EACH	1	1	
X0325553	TEMPORARY WOOD POLE, 60 FT., CLASS 4, 20 FT. MAST ARM	EACH	3	3	
X0326319	TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W, TYPE II DISTRIBUTION	EACH	3	3	
* X0325867	COMBINATION POLE MOUNTED ELECTRIC SERVICE BOX	EACH	1	1	
* X0325878	TRAFFIC SIGNAL WOOD POLE, 60 FT., CLASS 4	EACH	4	4	
70106800	CHANGEABLE MESSAGE SIGN	CAL MD	3	3	
* X8410118	MAINTENANCE OF TEMPORARY LIGHTING SYSTEM	L SUM	1	1	
* XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	2	2	
* XX007025	COARSE AGGREGATE BACKFILL (SPECIAL)	CU YD	310		310
* Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1

* SPECIALTY ITEMS
 X0323988 TEMPORARY SOIL RETENTION SYSTEM

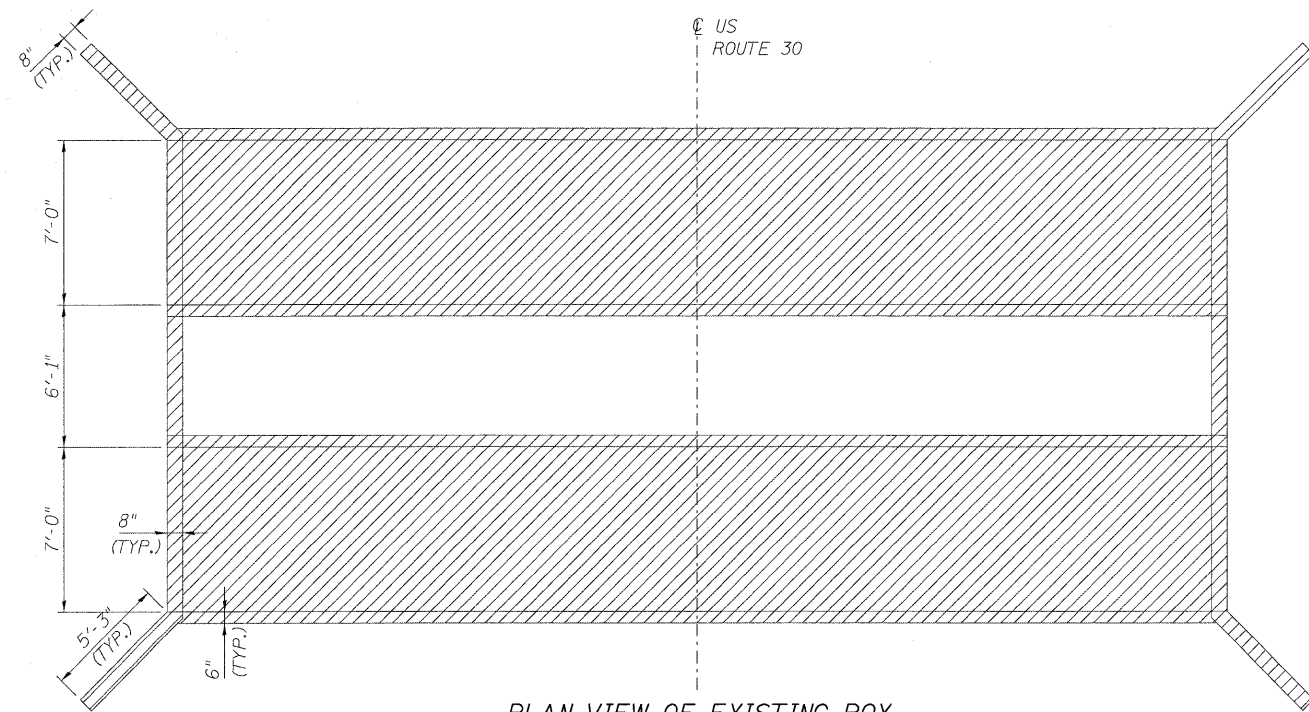
SQ FT 245 245



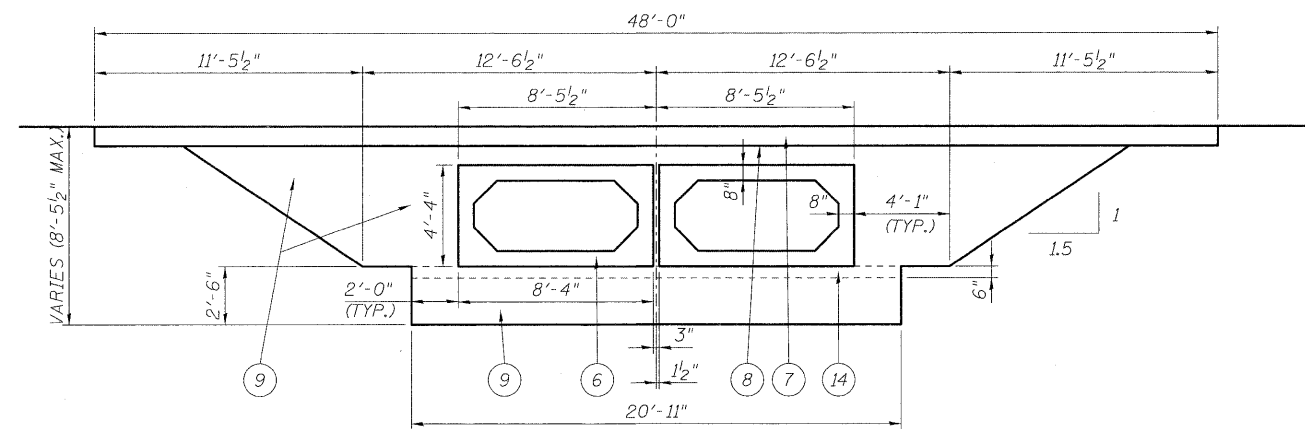
EXISTING CULVERT SECTION LOOKING NORTH
NO SCALE



EXISTING BOX CULVERT SECTION LOOKING WEST
NO SCALE



PLAN VIEW OF EXISTING BOX
NO SCALE



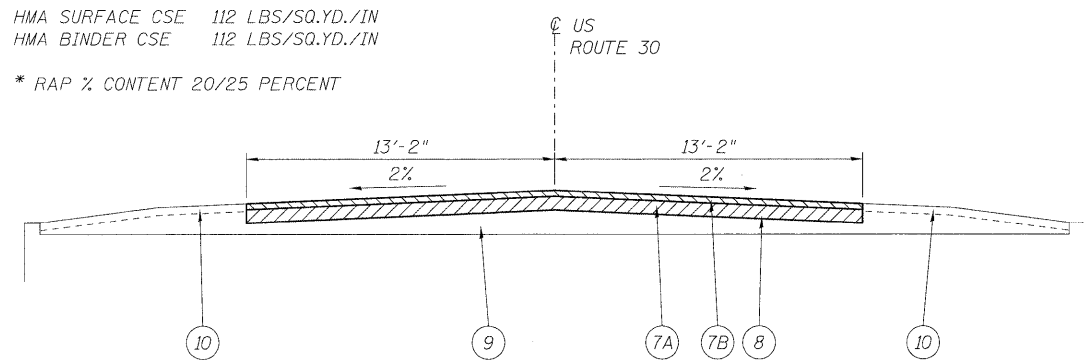
PROPOSED BOX CULVERT SECTION LOOKING WEST
NO SCALE

CLASS D PATCHES

APPLICATION	MIXTURE TYPE	AC TYPE	AIR VOIDS
US RT 30 THRU-LANES	HMA SURFACE COURSE MIX D, N70, (IL-9.5mm) WITH REQUIREMENTS	PG 64-22/58-22	4% @ 70 GYR.
US RT 30 THRU-LANES	HMA BINDER COURSE, IL-19.0, N70 WITH REQUIREMENTS	PG 64-22*/58-22	4% @ 70 GYR.

HMA SURFACE CSE 112 LBS/SQ.YD./IN
HMA BINDER CSE 112 LBS/SQ.YD./IN

* RAP % CONTENT 20/25 PERCENT



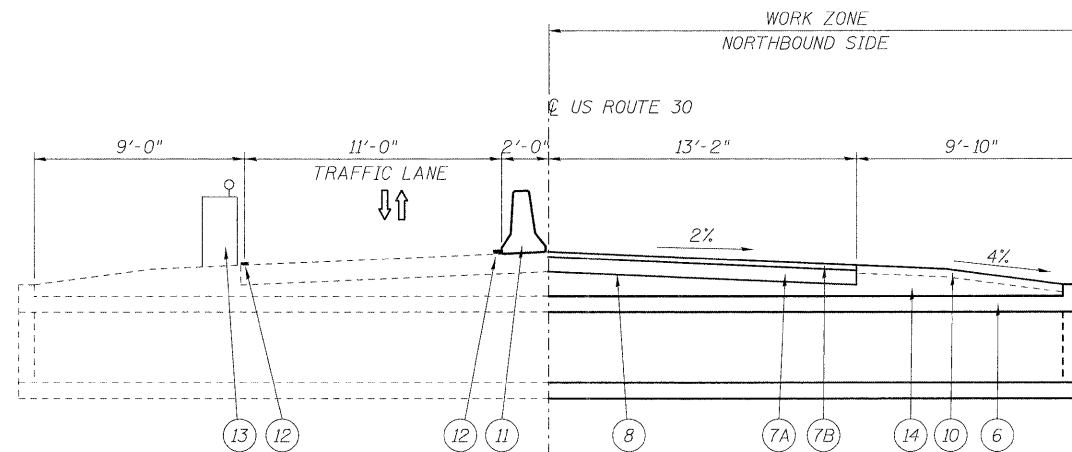
PROPOSED ROADWAY SECTION
NO SCALE

LEGEND

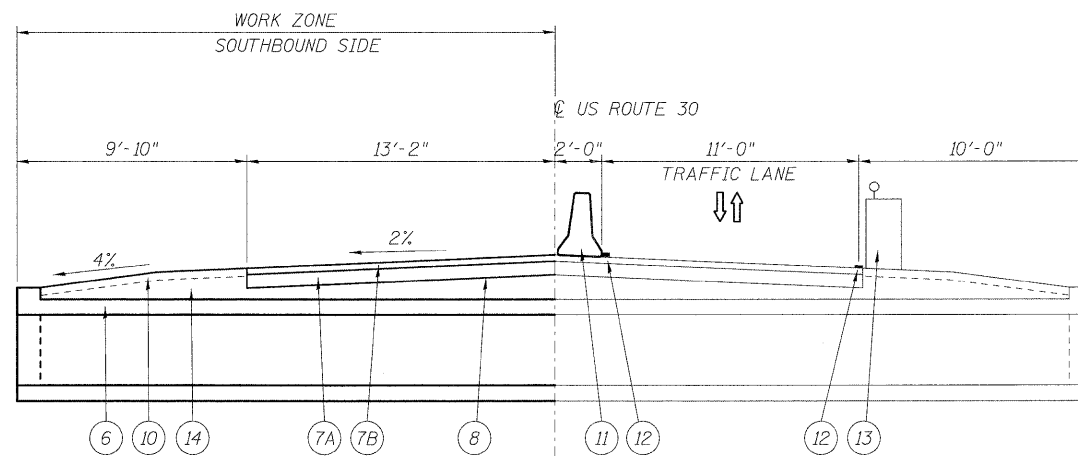
- ① PAVEMENT REMOVAL
- ② EARTH EXCAVATION
- ③ REMOVAL OF EXISTING STRUCTURES
- ④ STRUCTURE EXCAVATION
- ⑤ REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
- ⑥ PRECAST CONCRETE BOX CULVERT 7'x3'
- ⑦A HMA BINDER COURSE IL-19mm, N70, 8 1/2" (IN 3 LIFTS)
- ⑦B HMA SURFACE COURSE MIX D, N70, 1 1/2"
- ⑧ BITUMINOUS MATERIALS (PRIME COAT)
- ⑨ COARSE AGGREGATE BACKFILL (SPECIAL)
- ⑩ COMPOST FURNISH AND PLACE 4"
- ⑪ TEMPORARY CONCRETE BARRIER
- ⑫ PAVEMENT MARKING TAPE, TYPE III, 4" WHITE
- ⑬ DRUM WITH STEADY BURNING LIGHT
- ⑭ CA 7

NOTE:

1. THE INSTALLATION OF THE PRECAST CONCRETE BOX CULVERT WILL BE COMPLETED IN STAGES. CLASS D PATCHES, TYPE IV, 10" TEMPORARY PATCHES WILL BE PLACED AS NECESSARY TO OPEN THE ROAD TO TRAFFIC, OR AS DIRECTED BY THE ENGINEER.
2. EXCAVATION LIMITS VARY.
3. HMA BINDER AND SURFACE COURSE TO BE PAID FOR AS CLASS D PATCHES, TYPE IV, 10" IN SQ.YD.
4. THE COST 6" OF CA 7 UNDER CULVERT SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.



STAGE 1 @ STA. 267+59 LOOKING NORTH
NO SCALE



STAGE 2 @ STA. 267+59 LOOKING NORTH
NO SCALE

LEGEND






- ① PAVEMENT REMOVAL
- ② EARTH EXCAVATION
- ③ REMOVAL OF EXISTING STRUCTURES
- ④ STRUCTURE EXCAVATION
- ⑤ REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
- ⑥ PRECAST CONCRETE BOX CULVERT 7'x3'
- ⑦A HMA BINDER COURSE IL-19mm, N70, 8½" (IN 3 LIFTS)
- ⑦B HMA SURFACE COURSE MIX D, N70, 1½"
- ⑧ BITUMINOUS MATERIALS (PRIME COAT)
- ⑨ COARSE AGGREGATE BACKFILL (SPECIAL)
- ⑩ COMPOST FURNISH AND PLACE 4"
- ⑪ TEMPORARY CONCRETE BARRIER
- ⑫ PAVEMENT MARKING TAPE, TYPE III, 4" WHITE
- ⑬ DRUM WITH STEADY BURNING LIGHT
- ⑭ CA 7

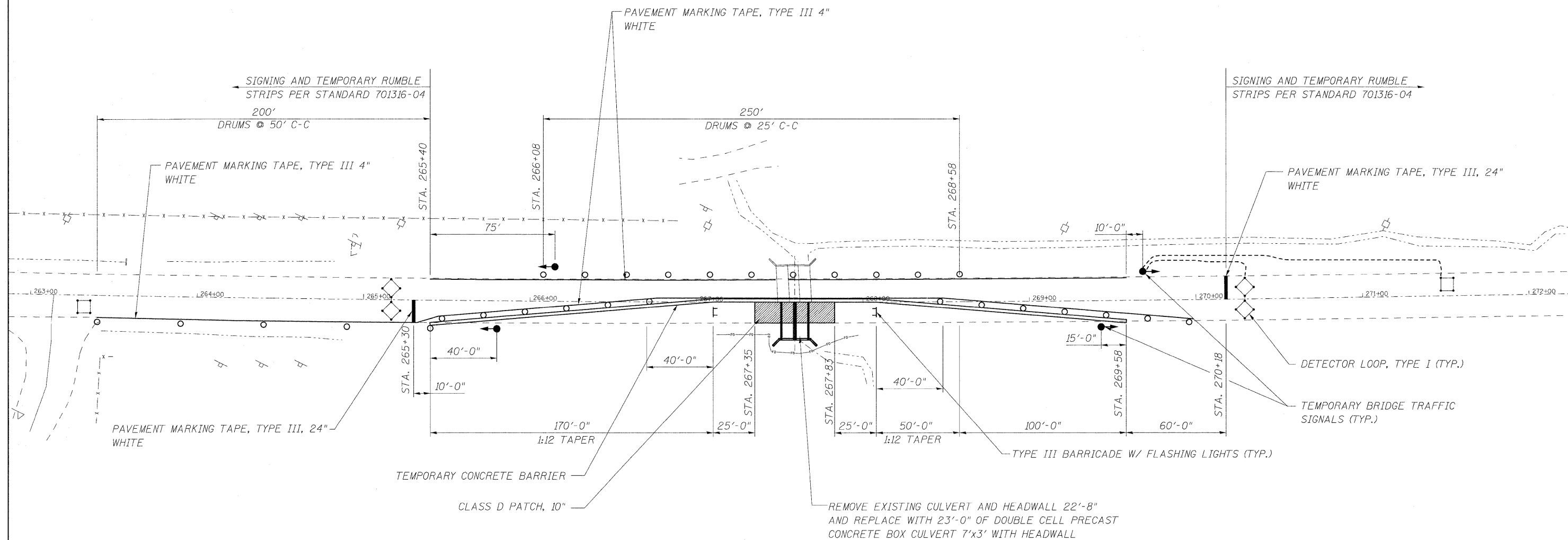
NOTE:

HMA BINDER AND SURFACE COURSE TO BE PAID FOR AS CLASS D PATCHES, TYPE IV, 10" IN SQ.YD.



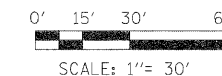
LEGEND

-  - WORK ZONE
-  - TRAFFIC SIGNAL
-   - DETECTOR LOOPS
-  - DRUM W/ STEADY BURN LIGHT



STAGE 1

1. INSTALL TRAFFIC CONTROL, TEMPORARY CONCRETE BARRIER, AND TEMPORARY BRIDGE TRAFFIC SIGNALS IN ACCORDANCE WITH STANDARD 701316-04 AND STAGE I MAINTENANCE OF TRAFFIC.
2. REMOVE EXISTING PAVEMENT ON NORTHBOUND SIDE OF US ROUTE 30.
3. PLACE TEMPORARY SOIL RETENTION SYSTEM.
4. REMOVE EAST HALF OF EXISTING CULVERT.
5. CONSTRUCT PROPOSED PRECAST BOX CULVERTS, HEADWALLS AND WINGWALLS, THEN BACKFILL.
6. CONSTRUCT CLASS D PATCH FROM STA. 267+35 RT TO STA. 267+83 RT.



LOCO INC.
 CONSULTING ENGINEERS
 1560 WALL ST., SUITE 222
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - MJY	REVISED - ---
DRAWN - ST	REVISED - ---
CHECKED - MJY	REVISED - ---
DATE - 01/16/2009	REVISED - ---

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**






**CONSTRUCTION STAGING PLAN - STAGE 1
 US ROUTE 30**

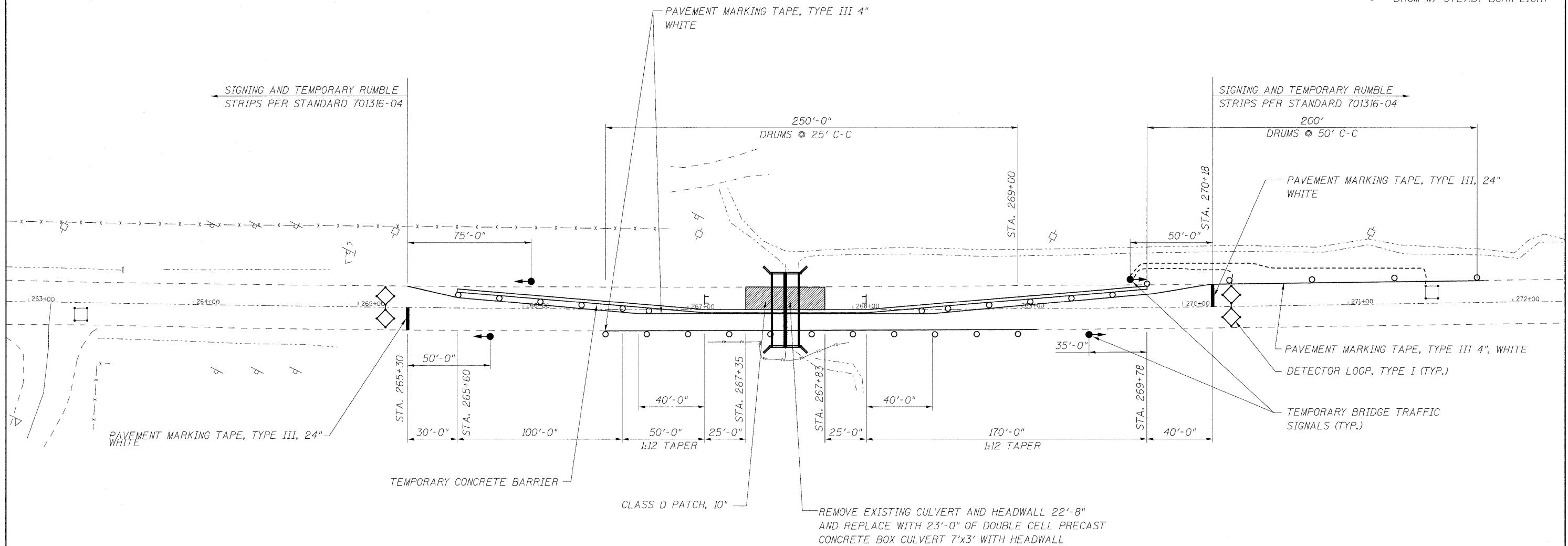
SCALE: 1" = 30' SHEET NO. 6 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 6
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



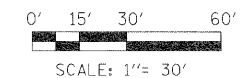
LEGEND

-  - WORK ZONE
-  - TRAFFIC SIGNAL
-   - DETECTOR LOOPS
-  - DRUM W/ STEADY BURN LIGHT



STAGE 2

1. RELOCATE TRAFFIC CONTROL AND TEMPORARY CONCRETE BARRIER AS SHOWN ON STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.
2. REMOVE EXISTING PAVEMENT ON SOUTHBOUND SIDE OF US ROUTE 30.
3. PLACE TEMPORARY SOIL RETENTION SYSTEM.
4. REMOVE WEST HALF OF EXISTING CULVERT.
5. CONSTRUCT THE REMAINDER OF THE PROPOSED PRECAST BOX CULVERTS, HEADWALLS AND WINGWALLS, THEN BACKFILL.
6. CONSTRUCT CLASS D PATCH FROM STA. 267+35 LT TO STA. 267+83 LT.
7. REMOVE TRAFFIC CONTROL AND OPEN ROAD TO TWO-WAY TRAFFIC.



LOCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST, SUITE 222
 NAPERVILLE, ILLINOIS 60563 Ph: (630) 577-9100

USER NAME = \$USER\$	DESIGNED - MJY	REVISED - ---
PLOT SCALE = \$SCALE\$	DRAWN - ST	REVISED - ---
PLOT DATE = \$DATE\$	CHECKED - MJY	REVISED - ---
	DATE - 01/16/2009	REVISED - ---

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

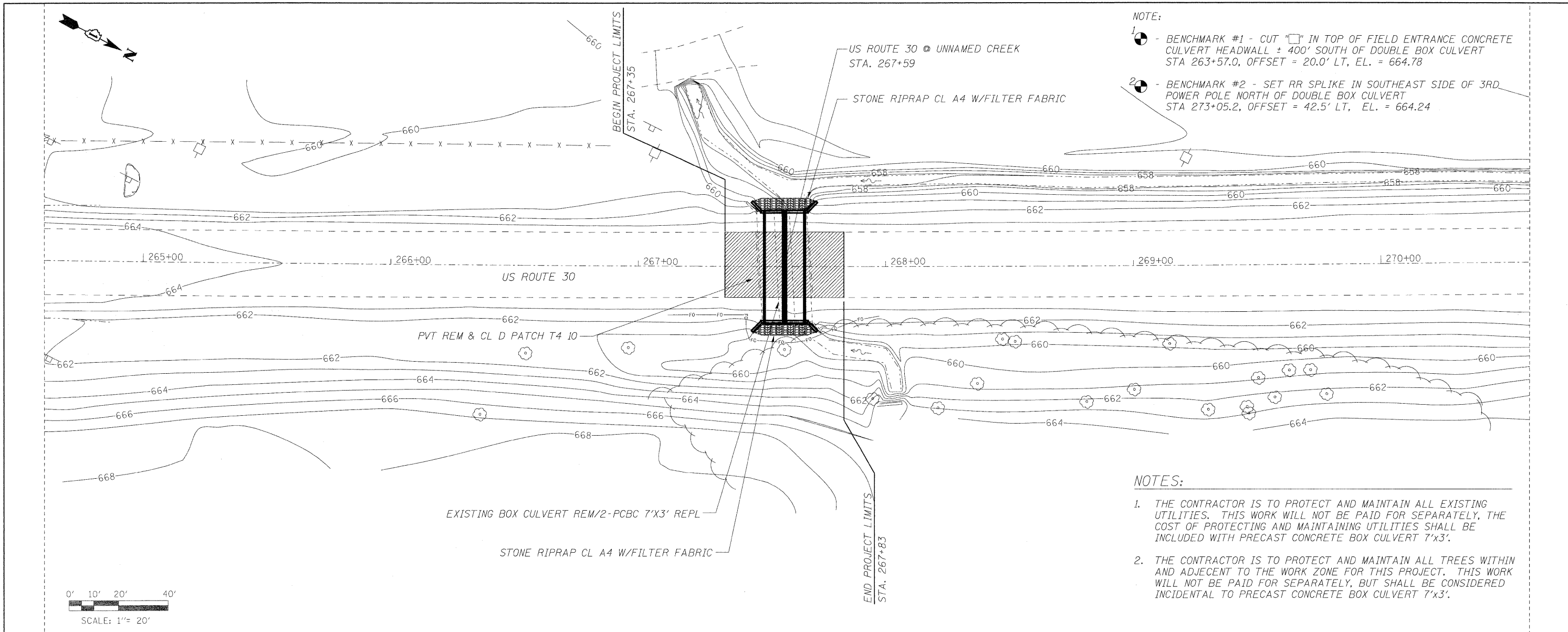
**CONSTRUCTION STAGING PLAN - STAGE 2
 US ROUTE 30**

SCALE: 1" = 30' SHEET NO. 7 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 7
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

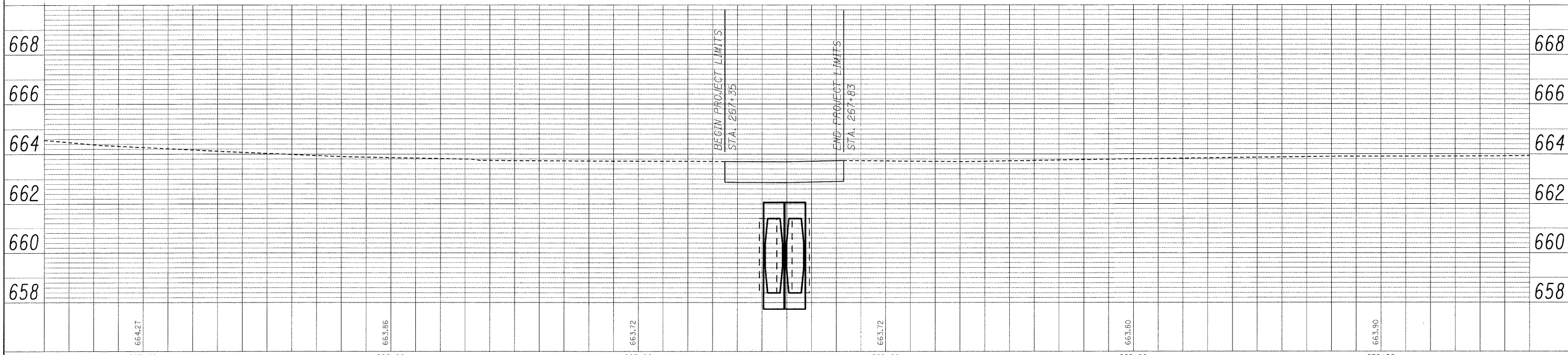
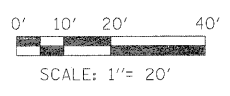
DATE: _____ BY: _____
 SURVEYED _____
 ALIGNED _____
 CHECKED _____
 NOTE BOOK _____
 NO. _____
 R.F. OF MAP CHECKED _____
 CAD FILE NAME _____

DATE: _____ BY: _____
 SURVEYED _____
 GRADES CHECKED _____
 NOTE BOOK _____
 NO. _____
 (B.M. NOTED) _____
 STRUCTURE NOTATIONS CHFD _____



NOTE:
 1 - BENCHMARK #1 - CUT "□" IN TOP OF FIELD ENTRANCE CONCRETE CULVERT HEADWALL ± 400' SOUTH OF DOUBLE BOX CULVERT STA 263+57.0, OFFSET = 20.0' LT, EL. = 664.78
 2 - BENCHMARK #2 - SET RR SPLIKE IN SOUTHEAST SIDE OF 3RD POWER POLE NORTH OF DOUBLE BOX CULVERT STA 273+05.2, OFFSET = 42.5' LT, EL. = 664.24

NOTES:
 1. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, THE COST OF PROTECTING AND MAINTAINING UTILITIES SHALL BE INCLUDED WITH PRECAST CONCRETE BOX CULVERT 7'x3'.
 2. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL TREES WITHIN AND ADJECENT TO THE WORK ZONE FOR THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 7'x3'.



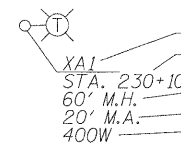






<p>CONSULTING ENGINEERS 1660 WALL ST, SUITE 222 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100</p>	DESIGNED - MJY	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE US ROUTE 30	F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 8
	DRAWN - ST	REVISED -			D-91-215-09			CONTRACT NO. 60F69	
	CHECKED - MJY	REVISED -			SCALE: 1" = 20' SHEET NO. 8 OF 20 SHEETS STA. 267+35 TO STA. 267+83			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	
	DATE - 01/16/2009	REVISED -							


LIGHTING INDEX OF SHEETS

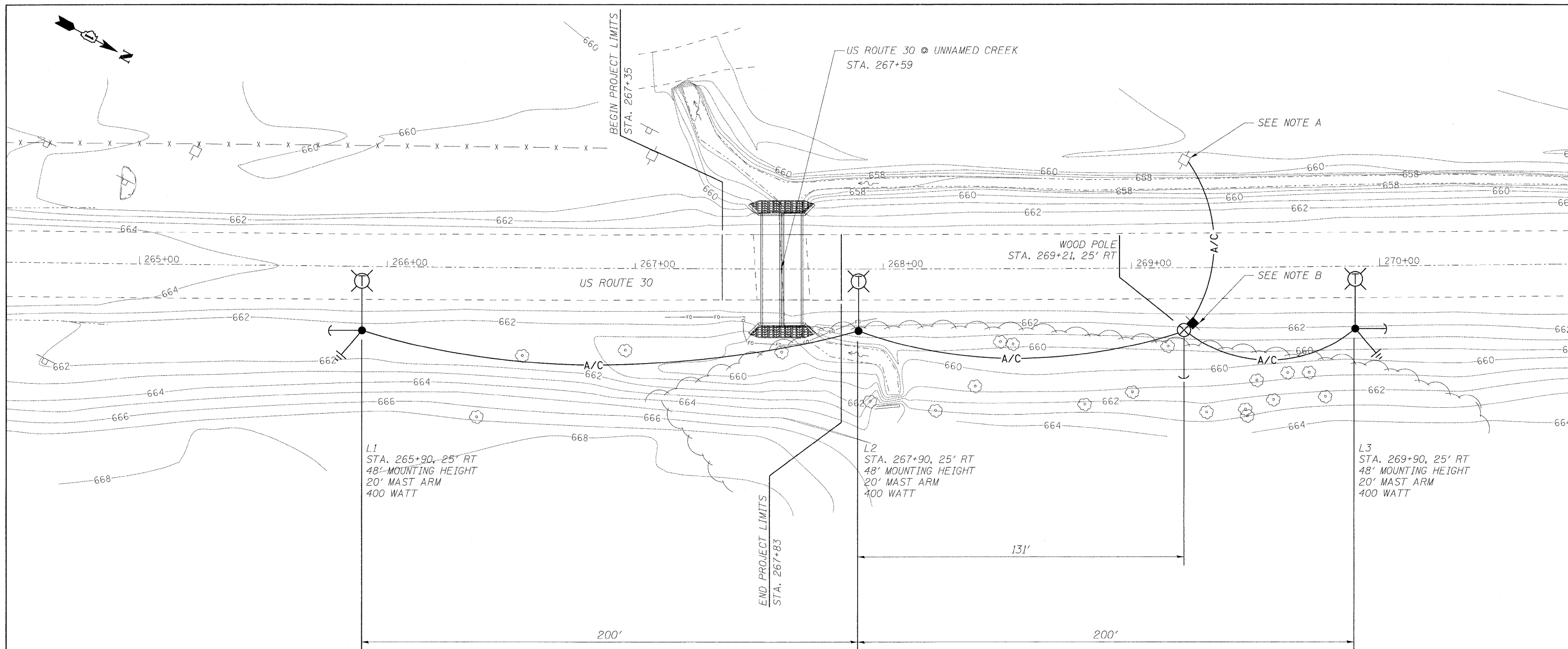
SHEET NO.	DESCRIPTION
9	TEMPORARY LIGHTING - GENERAL NOTES, INDEX AND SYMBOLS
10	TEMPORARY LIGHTING PLAN
11	TEMPORARY LIGHTING - DETAILS
12	TEMPORARY LIGHTING - DETAILS

ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO COORDINATE THE ELECTRICAL SERVICE WORK.
2. TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE LIGHT POLES, THE LIGHT POLES SHALL NOT BE ERECTED AND/OR LEFT TO STAND WITHOUT LUMINAIRES. NOTE THAT THE LIGHT POLES WILL NOT BE PAID FOR UNTIL THE POLES ARE FULLY APPROVED AND THE LUMINAIRES ARE INSTALLED.
3. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE A SOLID, SOFT DRAWN VC NO.2 BARE COPPER CONDUCTOR INSTALLED ACCORDING TO THE NEC REQUIREMENTS FOR BONDING OF COPPER GROUND RODS, DISCONNECT SWITCHES, TRAFFIC SIGNAL CONTROLLER, LUMINAIRES AND BARE MESSENGER CABLE.
4. SPECIAL CARE SHALL BE TAKEN DURING AUGER OPERATIONS IN EARTH TO NOT DAMAGE EXISTING FIBER OPTIC CABLES AND ANY UTILITIES AND/OR TREES ALONG US ROUTE 30 WITHIN THE PROJECT LIMITS.
5. ALL TEMPORARY LIGHTING UNITS SHALL BE INSTALLED ON WOOD POLES.
6. UNLESS OTHERWISE INDICATED THE PROPOSED TEMPORARY LIGHT POLES SHALL BE SET BACK FROM CENTERLINE OF STREET 25 FEET.
7. TEMPORARY WOOD POLES SHALL BE ERECTED TO MAINTAIN PROPOSED LUMINAIRE HEIGHT ABOVE ROADWAY PER PLANS.
8. A GROUND ROD SHALL BE INSTALLED AS SHOWN ON THE TEMPORARY LIGHTING PLANS.

ELECTRICAL SYMBOLS FOR PROPOSED WORK	
SYMBOL	DESCRIPTION
	TEMPORARY LIGHTING UNIT: POLE MOUNTED, SINGLE ARM AND LUMINAIRE. POLE SHALL BE 60' HEIGHT UNLESS NOTED OTHERWISE. CIRCUIT NUMBER STATION NUMBER AS INDICATED (TYP.) MOUNTING HEIGHT MAST ARM LENGTH LUMINAIRE WATTAGE
	AERIAL ELECTRIC CABLE, 3-1/C #4 WITH MESSENGER WIRE
	GROUND ROD
	TEMPORARY WOOD POLE
	POLE GUYING
	COMED AERIAL POWER LINE
	EXISTING COMED UNDERGROUND POWER LINE


 [Signature]
 11/16/09
 EXP 11/30/09



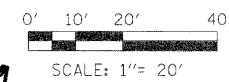
NOTE A - EXISTING COMED POLE MOUNTED TRANSFORMER, 25KVA.

NOTE B - COMED METER AND SERVICE BOX MOUNTED ON WOODEN POLE, SEE SHEET 12, FOR SERVICE ENTRANCE POLE DETAIL

TEMPORARY LIGHTING NOTES

1. TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT, HORIZONTAL-MOUNT, PHOTO-CELL, TYPE II DISTRIBUTION.
2. TEMPORARY LIGHTING TO BE REMOVED AS DIRECTED BY IDOT WHEN ROADWAY CONSTRUCTION IS COMPLETE.
3. ALL SYSTEMS ARE TO BE REQUIRED TO REMAIN OPERATIONAL DURING STAGED CONSTRUCTION.
4. GROUND EVERY THIRD POLE WITH TEMPORARY LUMINAIRE UNLESS NOTED OTHERWISE ON PLAN.
5. TEMPORARY POLES SHALL BE 60 FEET UNLESS OTHERWISE NOTED.

Chris Illick
 EIT #113019



LONCO, INC.
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 NAPERVILLE, ILLINOIS 60563 PH: (630) 571-9100

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DATE - 01/16/2009	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN
 US ROUTE 30**

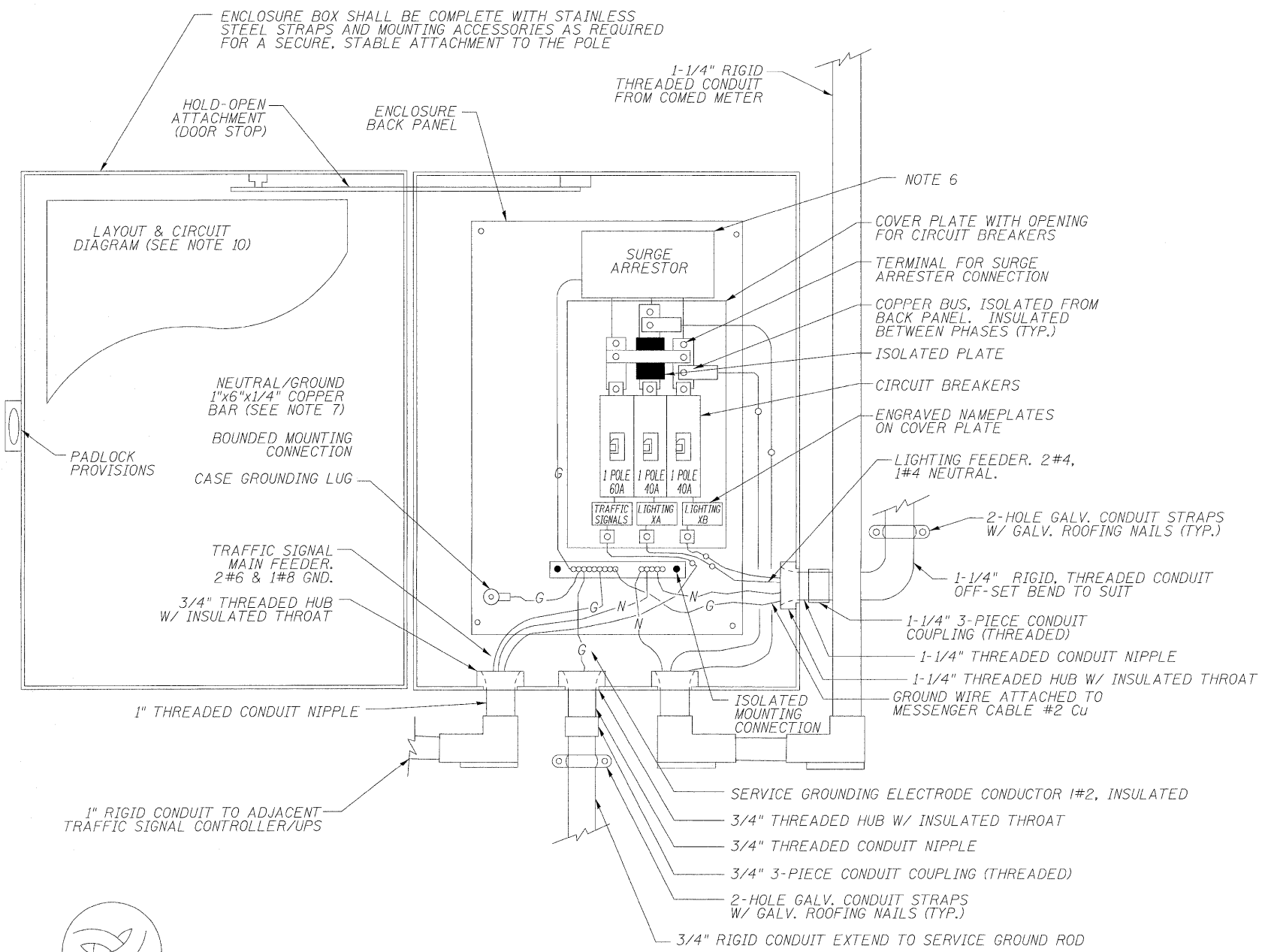
SCALE: 1" = 20' SHEET NO. 10 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 10
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

COST OF TEMPORARY POLE CAP MODIFICATION AND CONNECTION HARDWARE SHALL BE INCIDENTAL TO AERIAL CABLE PAY ITEM.

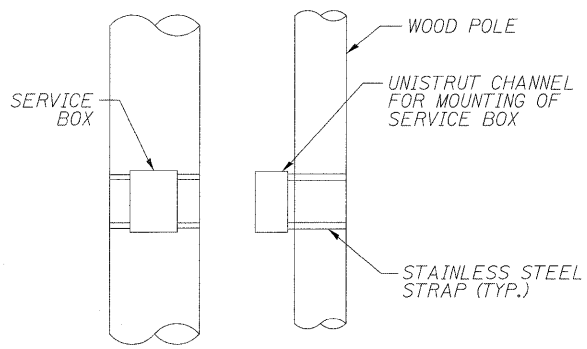
NOTES

- ELECTRICAL SERVICE SHALL BE OF THE VOLTAGE INDICATED OR DESIGNED BY THE ENGINEER. SERVICE DROP CABLE SHALL BE COMPATIBLE WITH THE SERVICE ACCORDINGLY. SOME INSTALLATIONS MAY CALL FOR SERVICE ENTRANCE EQUIPMENT SUITABLE FOR 3-WIRE SERVICE EVEN THOUGH INITIALLY WIRED FOR 2-WIRE SERVICE.
- THE POLE-MOUNTED ELECTRICAL SERVICE BOX DETAIL DEPICTS THE BASIC CONSTRUCTION OF THE EQUIPMENT. SLIGHT MODIFICATIONS APPLY FOR DIFFERING SERVICES AND APPLICATIONS.
- THE ELECTRICAL SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LISTED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.
- THE ELECTRICAL SERVICE EQUIPMENT SHALL BE A NEMA 4X STAINLESS STEEL, NOMINALLY 12"W x 16"H x 8"D, WITH A PIANO-HINGED DOOR, STEEL BACK PANEL, FAST-ACTING STAINLESS STEEL ENCLOSURE CLAMPS, PADLOCK PROVISIONS AND DOOR STOP. HOFFMAN CATALOG NO. A-16HT208SS6LP/A-16 P12/A-DSTOPK/C-PMK12, OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 120 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
- THE SURGE PROTECTOR SHALL BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICROSECONDS, RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, CUTLER-HAMMER CMOV230L065XST OR APPROVED EQUAL.
- BUS BARS, CONNECTORS AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED, AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS, OR THE ASSEMBLY SHALL BE A MANUFACTURED SPECIALTY PANELBOARD, CUTLER-HAMMER PRL2A OR APPROVED EQUAL.
- THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS SHALL BE PAINTED GREEN, THE HEADS OF NEUTRAL SCREWS SHALL BE PAINTED WHITE. THE SERVICE NEUTRAL AND SERVICE GROUNDING ELECTRODE CONDUCTOR SHALL BE TERMINATED ADJACENT TO EACH OTHER AT THE DIVIDE BETWEEN THE SECTIONS AND WIRING SHALL BE TERMINATED ONLY UPON THE APPROPRIATE SECTION.
- THE WIRING TERMINALS, INCLUDING THE GROUND/NEUTRAL BAR SHALL BE ARRANGED TO PROVIDE ADEQUATE ROOM FOR PERFORMING FIELD TERMINATIONS.
- A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE MECHANICALLY SECURED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
- A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN BREAKER.
- LUGS AND CONNECTORS SHALL BE RATED FOR 75 DEGREE C CONDUCTOR.
- THE EXACT MOUNTING HEIGHT OF THE BOX SHALL BE FIELD DETERMINED TO AVOID OBSTRUCTIONS AND PUBLIC ACCESS.

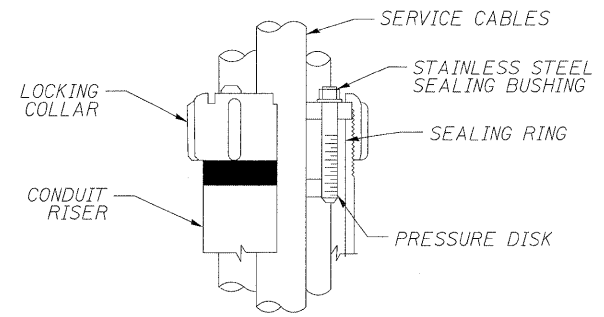


**COMBINATION POLE-MOUNTED ELECTRIC SERVICE BOX
GENERAL LAYOUT DIAGRAM**
NOT TO SCALE

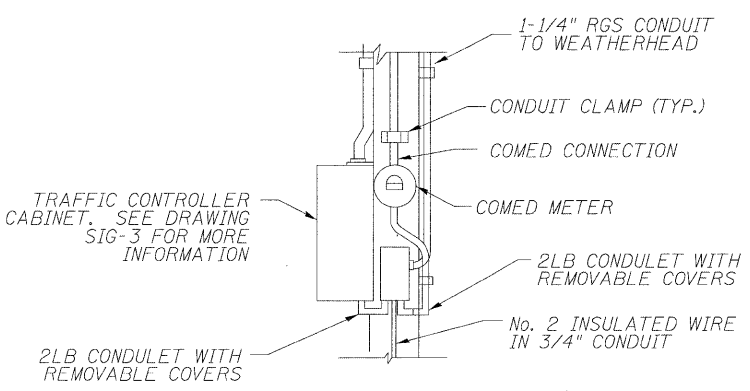
6" DECAL ON FRONT COVER



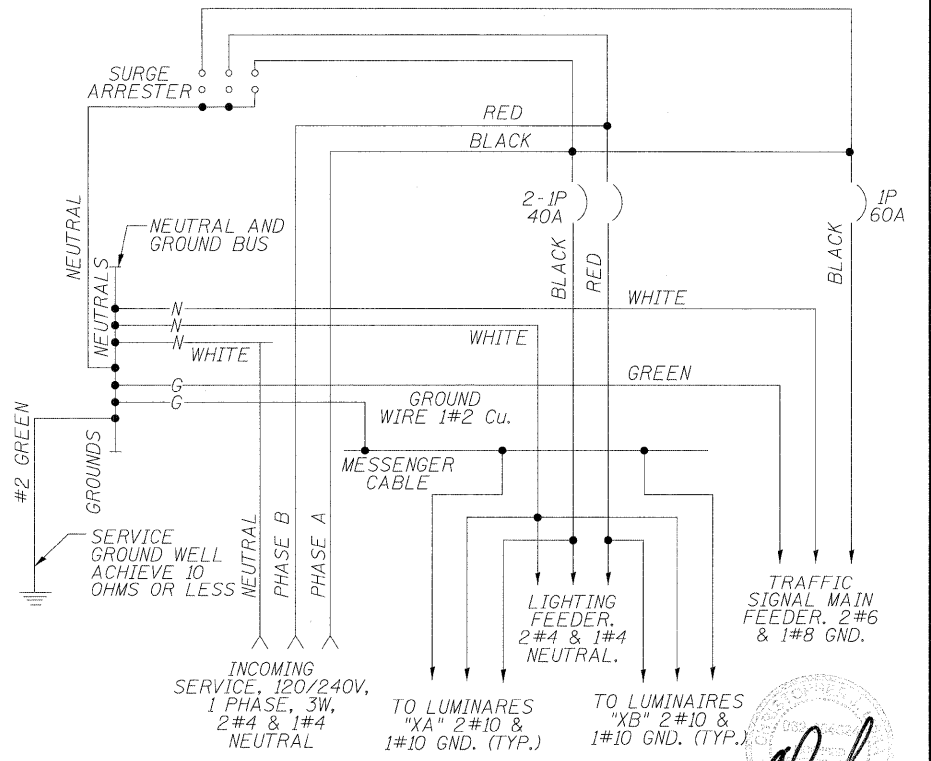
SERVICE BOX MOUNTING DETAIL
NOT TO SCALE



SEALING BUSHING DETAIL
NOT TO SCALE



SERVICE ENTRANCE DETAIL
NOT TO SCALE



SCHEMATIC DIAGRAM
NOT TO SCALE

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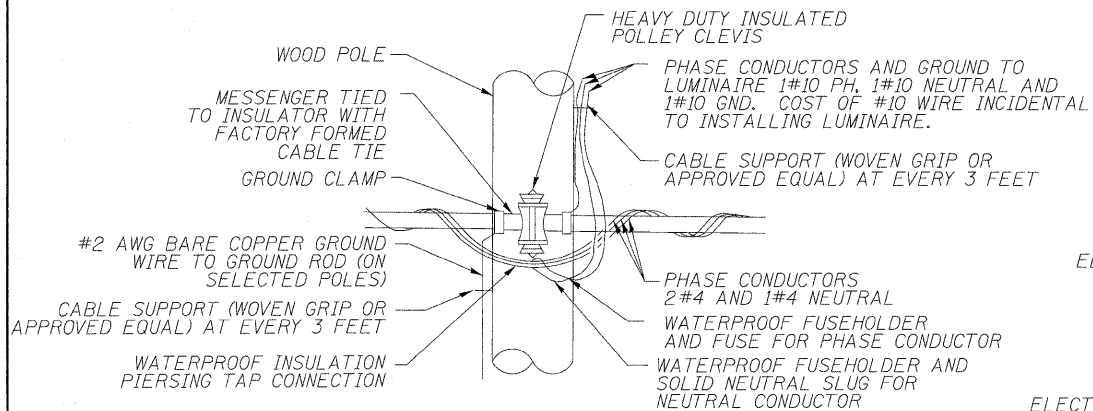
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING - DETAILS
US ROUTE 30**

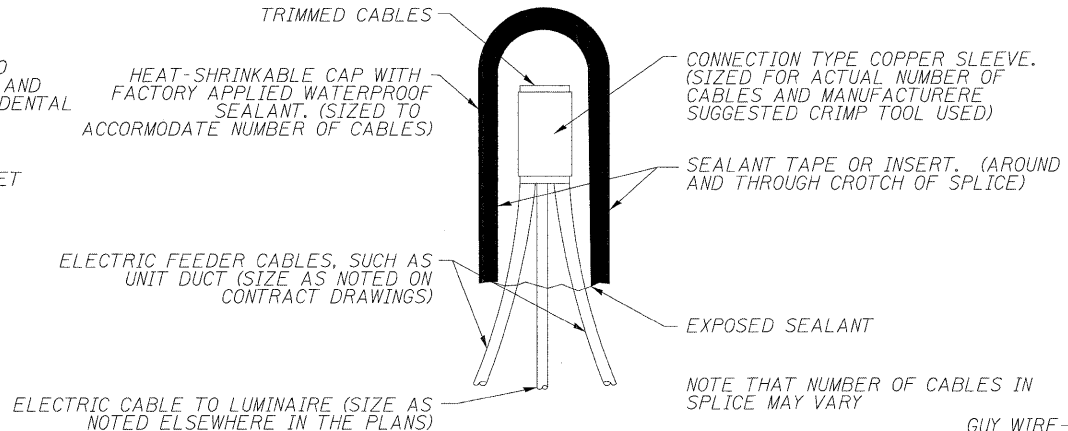
SCALE: NONE SHEET NO. 11 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 11
D-91-215-09		CONTRACT NO. 60F69		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

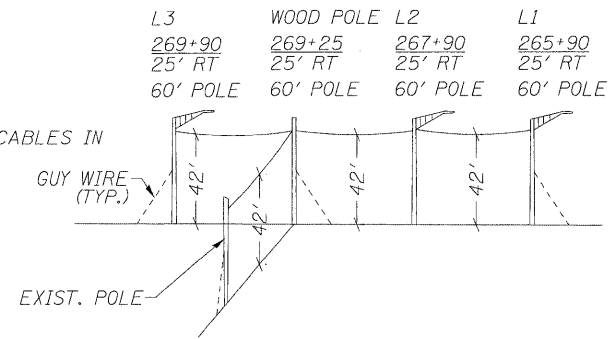
Chen
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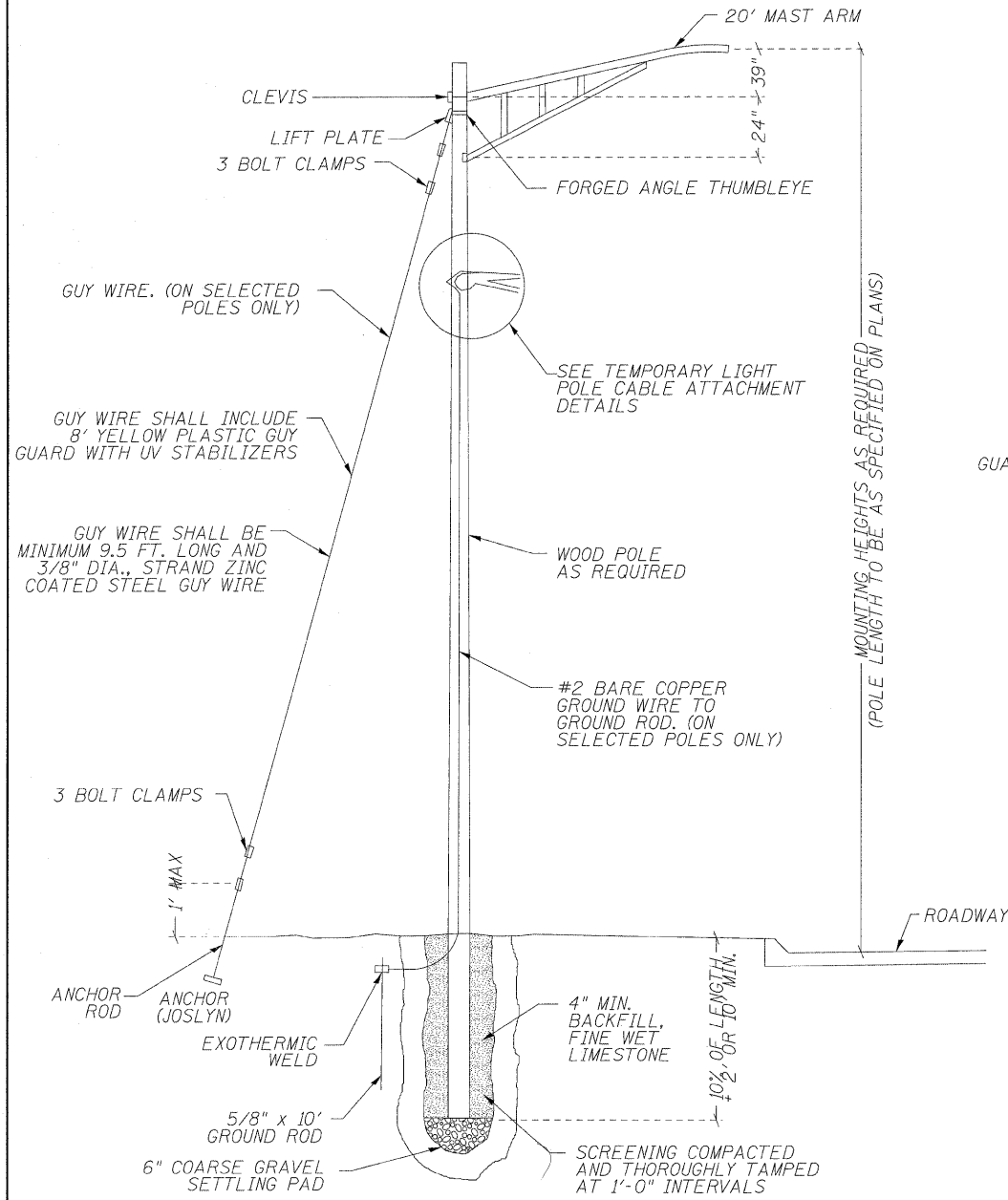
TEMPORARY LIGHT POLE CABLE ATTACHMENT DETAILS
NOT TO SCALE



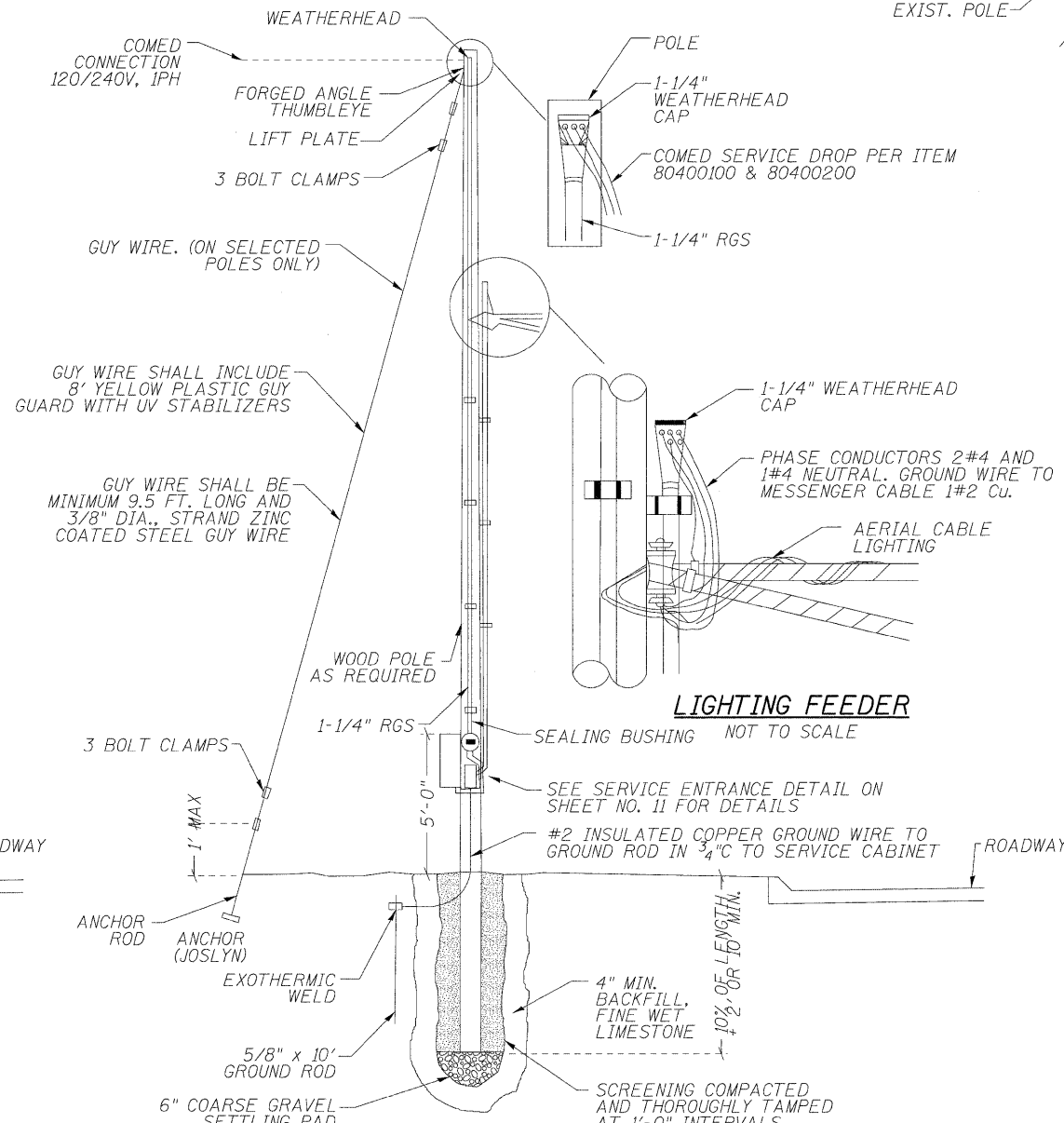
TYPICAL SPLICE DETAIL
NOT TO SCALE



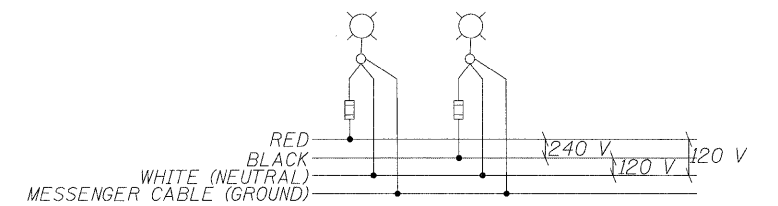
WIRING ELEVATION
NOT TO SCALE



TEMPORARY LIGHT POLE DETAIL
NOT TO SCALE



SERVICE ENTRANCE POLE DETAIL
NOT TO SCALE



TYPICAL POLE TO POLE SINGLE LINE WIRING DIAGRAM
NOT TO SCALE

*Check 11/6/09
Eve 11/30/09*

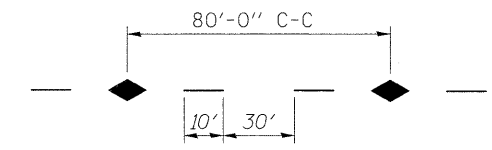
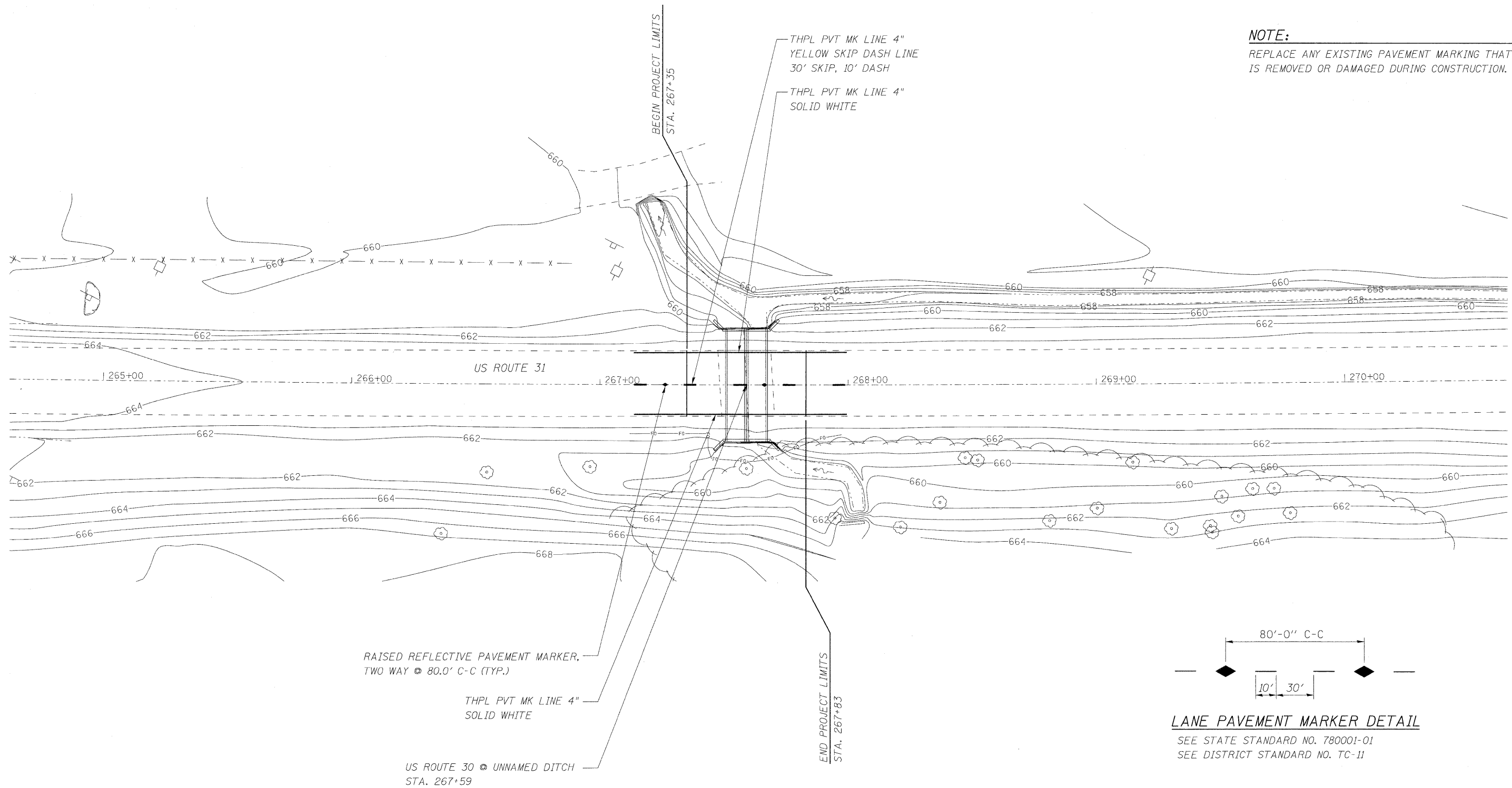


LEGEND

◆ TWO-WAY AMBER MARKER (80' C-C)

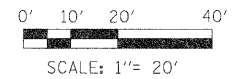
NOTE:

REPLACE ANY EXISTING PAVEMENT MARKING THAT IS REMOVED OR DAMAGED DURING CONSTRUCTION.



LANE PAVEMENT MARKER DETAIL

SEE STATE STANDARD NO. 780001-01
SEE DISTRICT STANDARD NO. TC-11



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DATE - 01/16/2009	REVISED -

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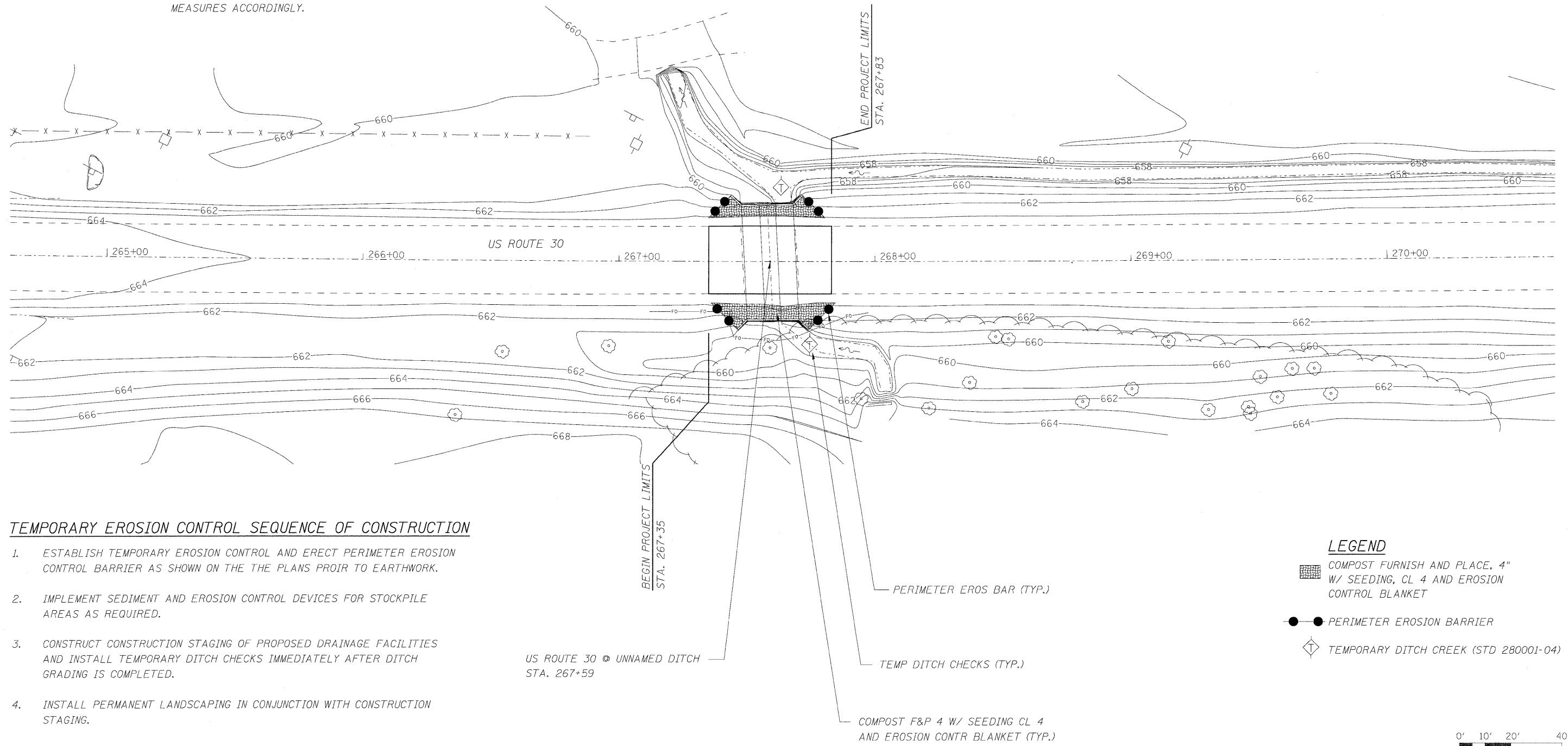
**PAVEMENT MARKING PLAN
US ROUTE 30**

SCALE: 1" = 20' SHEET NO. 13 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	13
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TEMPORARY EROSION CONTROL NOTES

1. ALL CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER PERMIT.
2. THE CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING OF VEGETATION.
3. TEMPORARY DITCH CHECKS SHALL BE INSTALLED IMMEDIATELY AFTER GRADING IS COMPLETED. DITCH CHECKS ARE BASED ON ONE (1) INSTALLATION AND THREE (3) REPLACEMENTS OVER THE DURATION OF THE CONTRACT. THESE ITEMS WILL BE PAID FOR AS EACH, REGARDLESS OF THE TYPE OF CONFIGURATION USED.
4. RUNOFF FROM EXCAVATION AREAS SHALL LEAVE THE SITE THROUGH SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL ADJUST HIS OPERATION AND IMPLEMENT EROSION CONTROL MEASURES ACCORDINGLY.
5. THE CONTRACTOR SHALL SURROUND ANY NECESSARY EARTH STOCKPILES WITH PERIMETER EROSION BARRIER.
6. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AT ALL TIMES. EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS OR WITHIN 24 HOURS AFTER A 13 MM (0.5 INCH) RAINFALL OR SNOWFALL.
7. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE BEEN CONCLUDED. AREAS THAT HAVE STEEP SLOPES OR WILL NOT RECEIVE PERMANENT LANDSCAPING SHALL BE TEMPORARILY SEEDED. ALL FLATTER AREAS OR AREAS WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND EXCELSIOR BLANKET WITHIN SEVEN (7) CALENDAR DAYS.

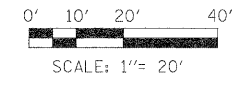


TEMPORARY EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. ESTABLISH TEMPORARY EROSION CONTROL AND ERECT PERIMETER EROSION CONTROL BARRIER AS SHOWN ON THE THE PLANS PROIR TO EARTHWORK.
2. IMPLEMENT SEDIMENT AND EROSION CONTROL DEVICES FOR STOCKPILE AREAS AS REQUIRED.
3. CONSTRUCT CONSTRUCTION STAGING OF PROPOSED DRAINAGE FACILITIES AND INSTALL TEMPORARY DITCH CHECKS IMMEDIATELY AFTER DITCH GRADING IS COMPLETED.
4. INSTALL PERMANENT LANDSCAPING IN CONJUNCTION WITH CONSTRUCTION STAGING.
5. CLEAN DRAINAGE FACILITIES AND REMOVE TEMPORARY EROSION DEVICES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.

LEGEND

- COMPOST FURNISH AND PLACE, 4" W/ SEEDING, CL 4 AND EROSION CONTROL BLANKET
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CREEK (STD 280001-04)



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CONSULTING ENGINEERS
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USER NAME = #USER#	DESIGNED - MJY	REVISED -
	DRAWN - ST	REVISED -
PLOT SCALE = #SCALE#	CHECKED - MJY	REVISED -
PLOT DATE = #DATE#	DATE - 01/16/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

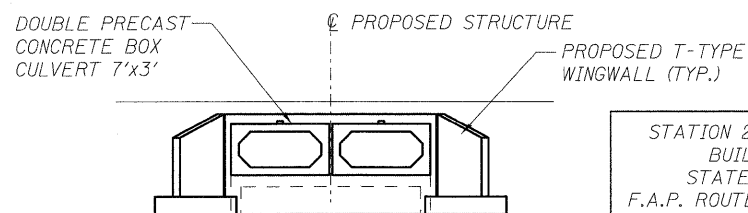
EROSION CONTROL PLAN US ROUTE 30	
SCALE: 1" = 20'	SHEET NO. 14 OF 20 SHEETS
STA. 267+35 TO STA. 267+83	

F.A.P. RTE. 349	SECTION 15 T-1	COUNTY WILL	TOTAL SHEETS 20	SHEET NO. 14
D-91-215-09		CONTRACT NO. 60F69		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

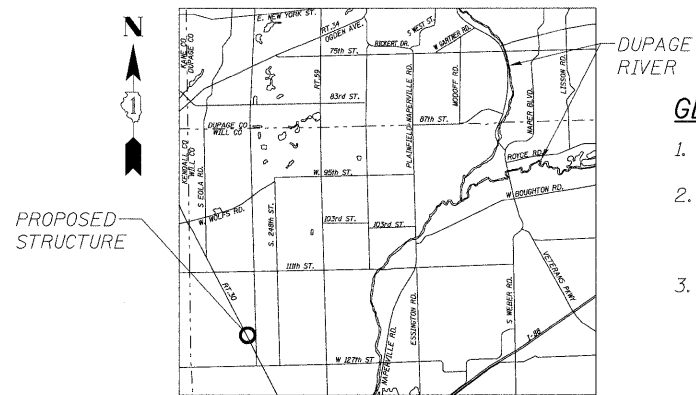
INDEX OF STRUCTURAL SHEETS

SHT. NO.	DESCRIPTION
15	GENERAL PLAN, ELEVATION AND INDEX
16	HEADWALL DETAILS
17	WINGWALL DETAILS



STATION 267+59 (PROJECT)
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. ROUTE 349 SEC. 15 T-1
LOADING HS20
STR. NO. 099-0508

NAME PLATE
See Std. 515001

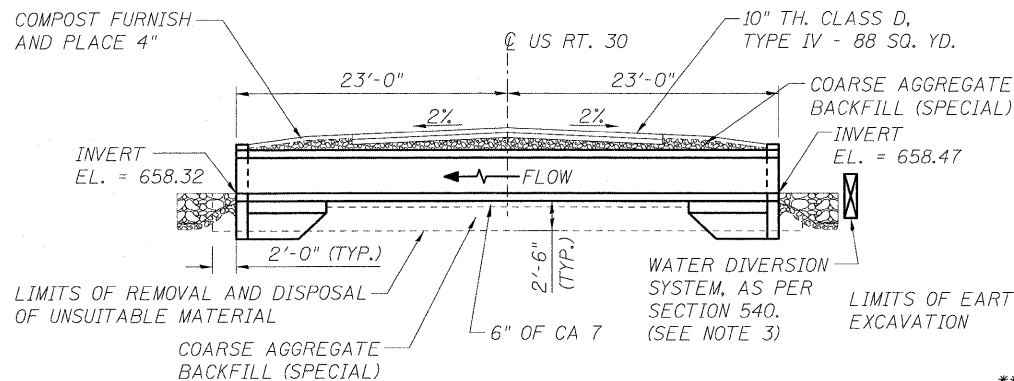


LOCATION SKETCH

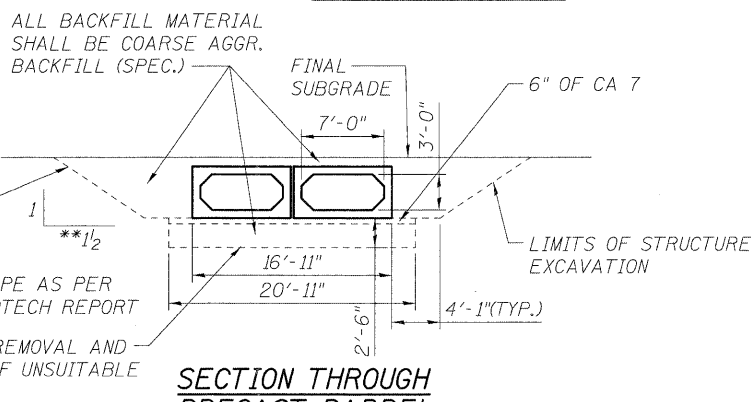
GENERAL NOTES

1. EXISTING STRUCTURE: NOT SALVAGEABLE. THE NEW STRUCTURE NUMBER IS 099-0508.
2. THE PROPOSED PRECAST CONCRETE BOX CULVERT SHALL BE DESIGNED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OF AASHTO M273. COST IS INCLUDED IN PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.
3. FLOW OF THE CREEK UNDER US ROUTE 30 IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY PLACE A TEMPORARY STREAM DIVERSION AT THE UPSTREAM END OF THE BOX CULVERT/ WINGWALLS AND TEMPORARILY PUMPING OR OTHERWISE CONVEYING THE STREAM FLOW THROUGH THE WORK ZONE. THE DESIGN AND CONSTRUCTION OF THE TEMPORARY DIVERSION SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THE COST SHALL BE INCLUDED IN CONCRETE BOX CULVERTS ITEM. THE TEMPORARY STREAM DIVERSION PLAN TO BE USED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.
4. ALL CONSTRUCTION JOINTS SHALL BE BONDED.
5. THE INFORMATION SHOWN IN THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE EXISTENCE, TYPE, SIZE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS MAY BE NECESSARY TO AVOID CONFLICT WITH CONSTRUCTION OPERATIONS AND/OR DAMAGE TO THE UTILITY.
6. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 7'x3'.
7. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL TREES WITHIN AND ADJACENT TO THE WORK ZONE FOR THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO PRECAST CONCRETE BOX CULVERT 6'x6'.
8. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.
9. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
10. THE CONTRACTOR SHALL SUBMIT A PLAN AND SCHEDULE OF CONSTRUCTION ACTIVITIES TO THE ENGINEER FOR APPROVAL BEFORE STARTING ANY WORK FOR THIS PROJECT.
11. AS-BUILT/ACTUAL DETAILS OF EXISTING BOX CULVERT AND WINGWALLS ARE NOT AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY ACTUAL EXISTING STRUCTURE TO BE REMOVED.
12. THE COST 6" OF CA 7 UNDER CULVERT SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.

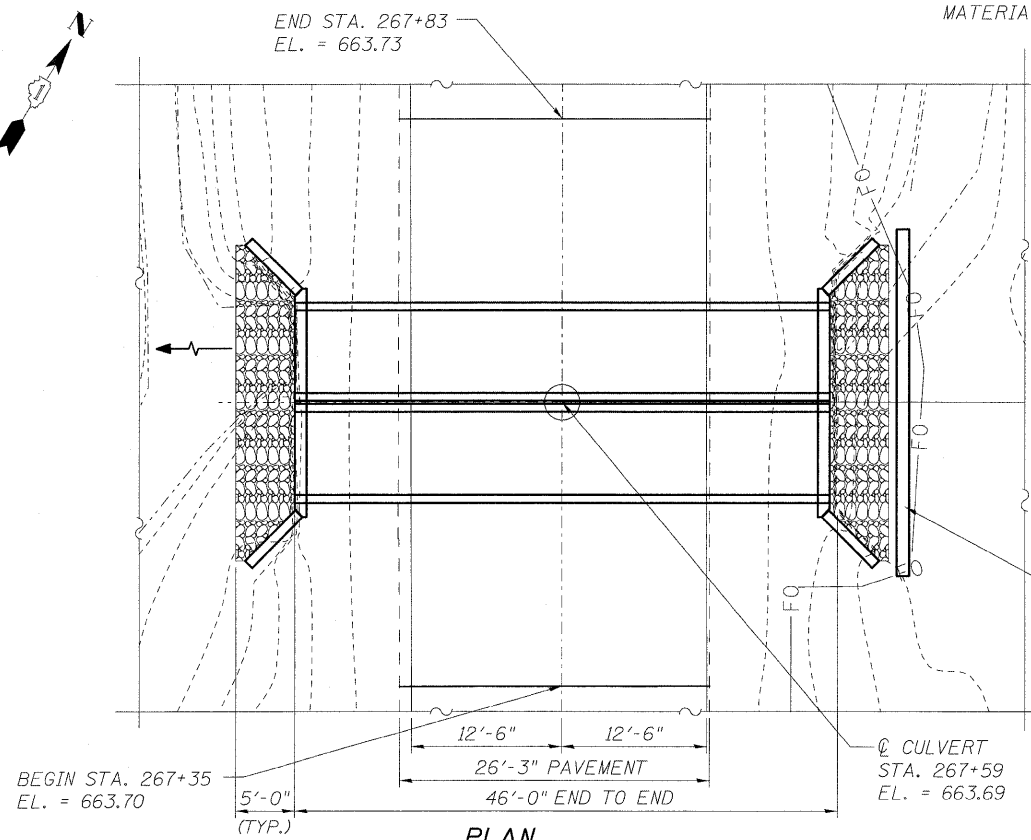
DOWNSTREAM END ELEVATION



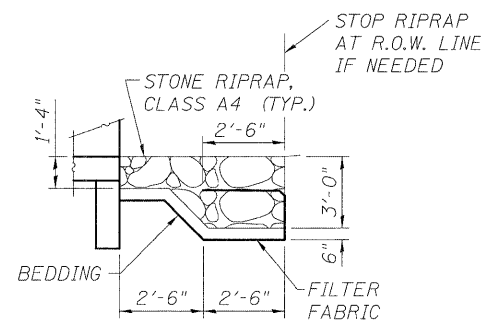
LONGITUDINAL SECTION
AT ϕ CULVERT, LOOKING NORTH



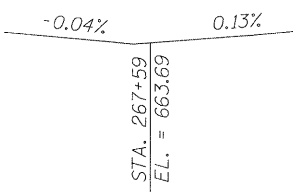
SECTION THROUGH PRECAST BARREL



PLAN



SECTION THRU RIPRAP



PROFILE GRADE
(ALONG ϕ ROADWAY)

DESIGN LOADING

HS20-44 AND ALTERNATE MILITARY LOADING AND ALLOWANCE FOR 50 P.S.F. FUTURE WEARING SURFACE

DESIGN SPECIFICATIONS

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002

DESIGN STRESSES

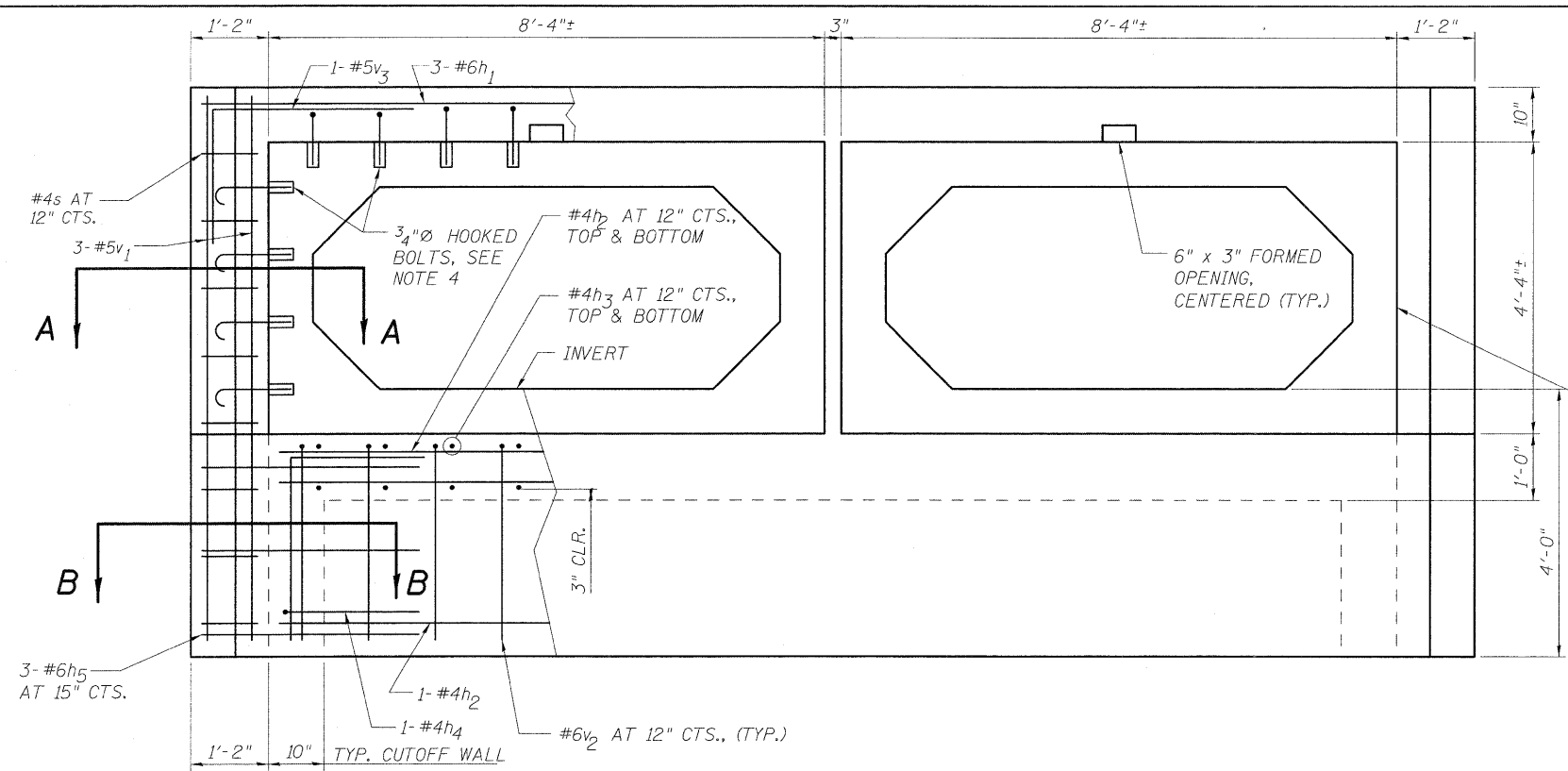
FIELD UNITS	PRECAST UNITS
$f'_c = 3,500$ psi	$f'_c = 5,000$ psi
$f_y = 60,000$ psi (REINFORCEMENT)	$f_y = 65,000$ psi (WWF)
	$f_y = 60,000$ psi (REINFORCEMENT)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Horizontal Bedrock Acceleration Coefficient (A) = 3.5%g
Site Coefficient (S) = 1.0

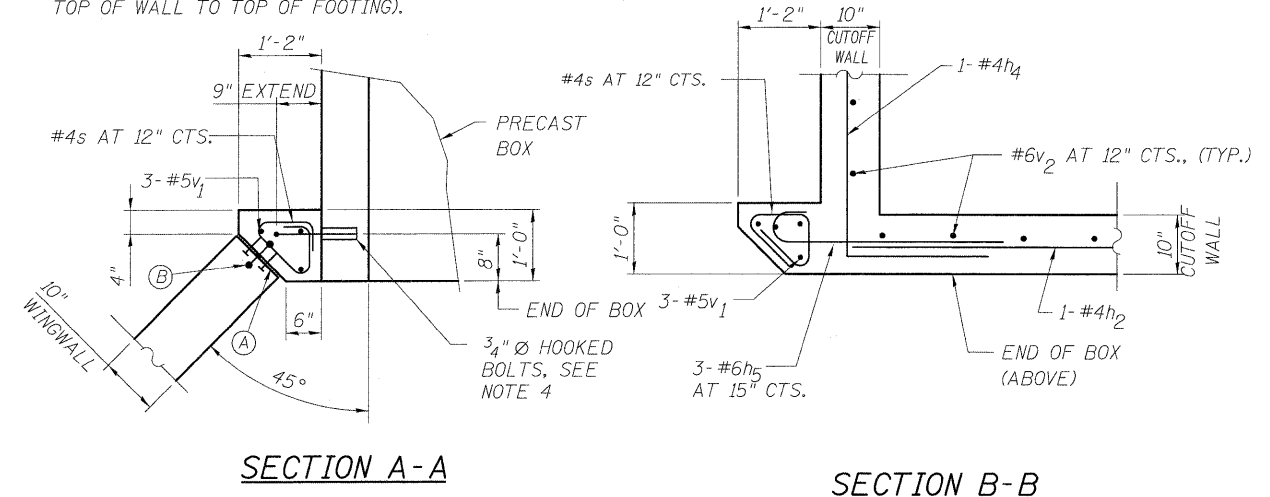
DESIGNED - WHE	REVISIONS
DRAWN - ST	REVISIONS
CHECKED - WHE	REVISIONS
DATE - 01/21/2009	REVISIONS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	15
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



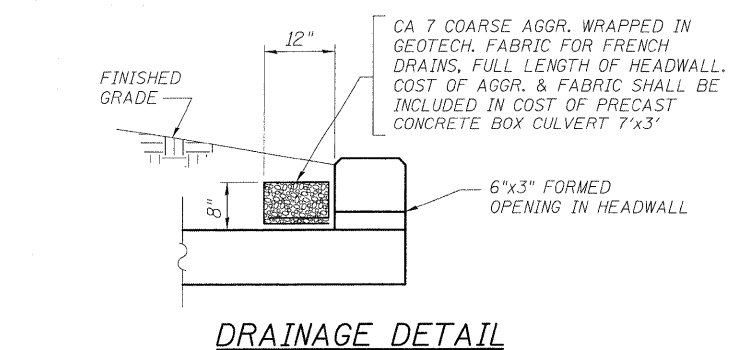
- (A) 1/2" PREMOULDED JOINT FILLER, INSTALL w/ 2 COLUMNS OF CONC. NAILS (FLAT HD. C.S.), 1" LONG, AT 12" CTS., VERTICAL.
- (B) 6" HOLLOW BULB TYPE NONMETALLIC WATER SEAL (6" FROM TOP OF WALL TO TOP OF FOOTING).

HEADWALL ELEVATION



SECTION A-A

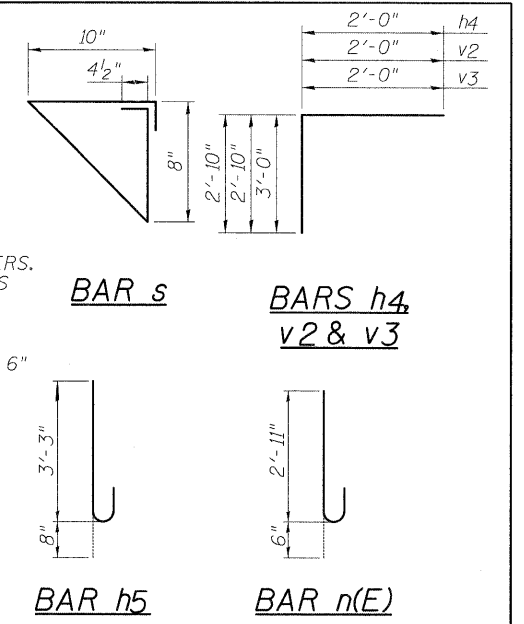
SECTION B-B



DRAINAGE DETAIL

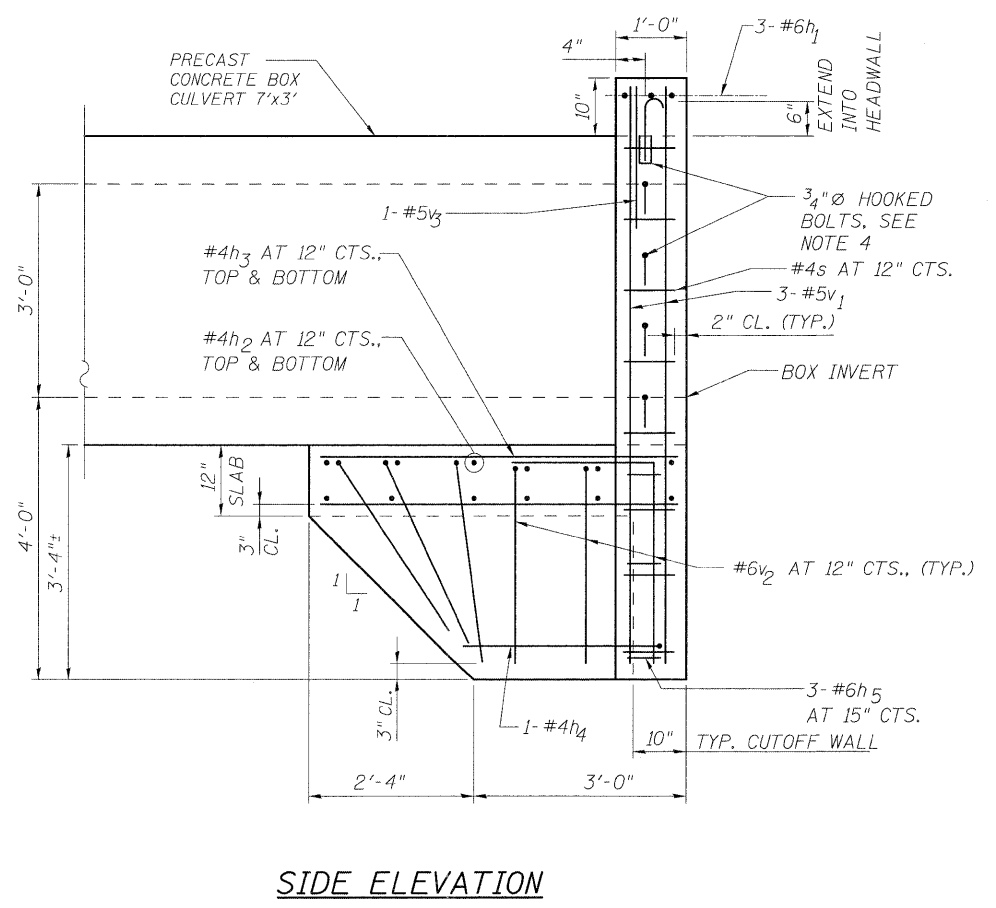
NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS BEFORE ORDERING MATERIALS.
 2. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS, EXCEPT AS NOTED.
 3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 4. TO CONNECT CAST-IN-PLACE COLLAR TO PRECAST BOX, PROVIDE 3/4" Ø HOOKED BOLTS WITH EMBEDDED INSERTS AT 12" MAXIMUM CENTERS. HOOKED BOLTS SHALL EXTEND 6" INTO HEADWALL AND 9" INTO SIDES OF COLLAR. COST SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.
 5. PROVIDE PROTECTIVE COAT ON TOP HORIZONTAL SURFACES AND TOP 6" ON INSIDE FACES OF HEADWALLS.
- PRECAST CONCRETE BOX CULVERT 7'x3' (TYP.), DESIGN AND FINAL DIMENSIONS BY CONTRACTOR, CONFORMING TO AASHTO M273



BILL OF MATERIAL

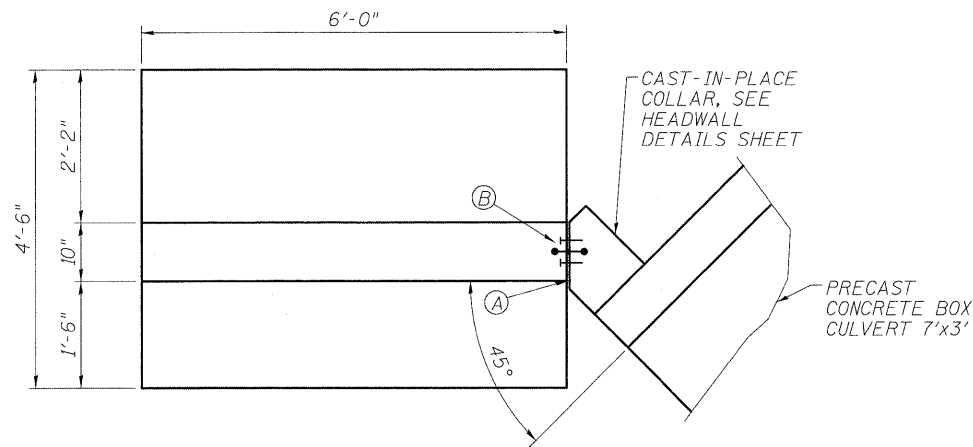
Bar	No.	Size	Length	Shape
h	52	#4	5'-8"	—
h1	6	#6	18'-11"	—
h2	26	#4	16'-6"	—
h3	68	#4	5'-0"	—
h4	4	#4	4'-10"	┌
h5	12	#6	3'-11"	┌
n(E)	28	#4	3'-5"	┌
s	36	#4	3'-4"	┌
t	48	#4	4'-2"	—
v	14	#4	11'-8"	—
v1	12	#5	8'-1"	—
v2	50	#6	4'-10"	┌
v3	4	#5	5'-0"	┌
v4	4	#4	11'-8"	—
w	32	#5	5'-8"	—
Item	Unit	Quantity		
CONCRETE BOX CULVERTS	CU YD	25.7		
REINFORCEMENT BARS	POUND	1975		
REINFORCEMENT BARS, EPOXY COATED	POUND	106		
STRUCTURE EXCAVATION	CU YD	140		
EARTH EXCAVATION	CU YD	116		
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	115		
COARSE AGGREGATE BACKFILL (SPECIAL)	CU YD	310		
FILTER FABRIC	SQ YD	48		
STONE RIPRAP, CLASS A4	SQ YD	26		
PRECAST CONCRETE BOX CULVERT 7'x3'	FOOT	92		
PROTECTIVE COAT	SQ YD	11		



SIDE ELEVATION

(A) 1/2" PREMOULDED JOINT FILLER, INSTALL W/ 2 COLUMNS OF CONC. NAILS (FLAT HD. C.S.), 1" LONG, AT 12" CTS., VERTICAL.

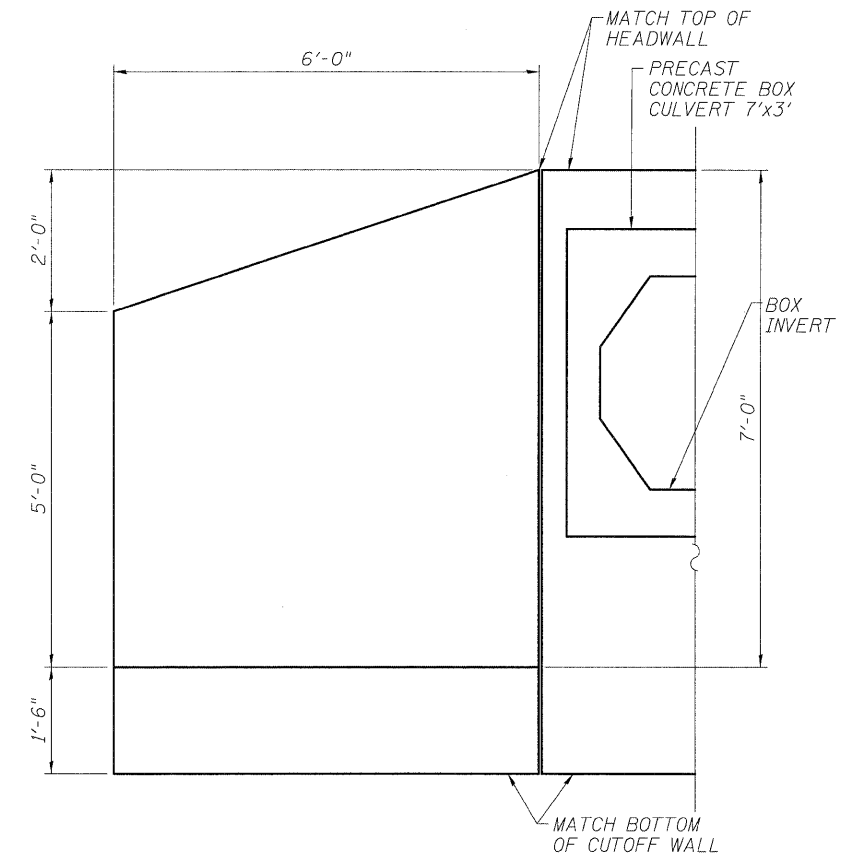
(B) 6" HOLLOW BULB TYPE NONMETALLIC WATER SEAL (6" FROM TOP OF WALL TO TOP OF FOOTING).



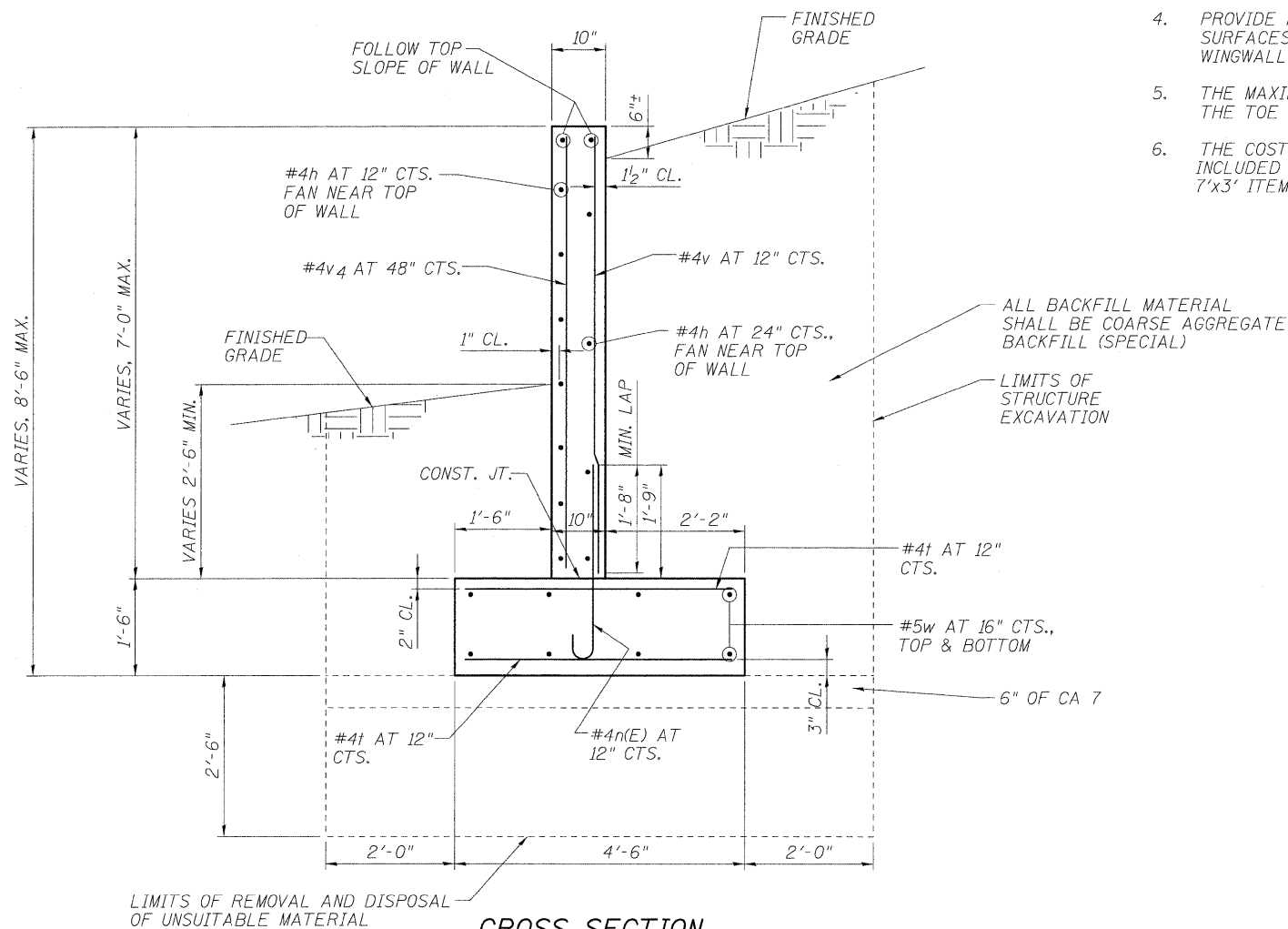
PLAN

NOTES

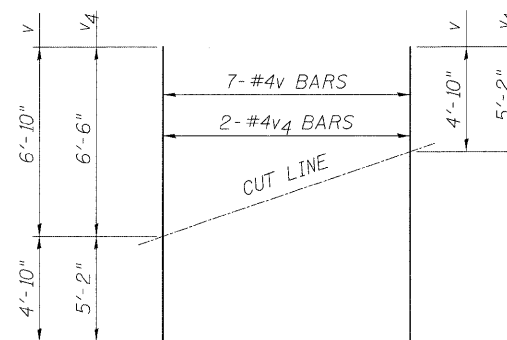
1. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS, EXCEPT AS NOTED.
2. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
3. SEE HEADWALL DETAILS SHEET FOR BILL OF MATERIAL.
4. PROVIDE PROTECTIVE COAT ON TOP HORIZONTAL SURFACES AND TOP 12" ON INSIDE FACES OF WINGWALLS.
5. THE MAXIMUM DESIGN SOIL BEARING PRESSURE AT THE TOE OF THE WINGWALL FOOTING IS 2500 PSF.
6. THE COST 6" OF CA 7 UNDER WINGWALL SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX CULVERT 7'x3' ITEM.



ELEVATION



CROSS SECTION



FIELD CUTTING DIAGRAM

Order v & v4 bars full length. Cut as shown and use remainder of bars in opposite wingwall.

Wang Engineering, INC.
 Consulting Geotechnical and
 Environmental Engineers
 wangeng3@wangeng.com
 1145 Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG BC-01

Page 1 of 1

WEI Job No.: 563-02-01

Client: **Lonco, Incorporated**
 Project: **US Route 30 Culvert over Unnamed Creek**
 Location: **NW 1/4, Sec. 29, T37N, R9E, Will County**

Datum: NGVD
 Elevation: 663.70 ft
 North: 1818518.28 ft
 East: 1010838.76 ft
 Station:
 Offset:

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
663.1	7-inch thick ASPHALT --PAVEMENT--														
	Loose, brown GRAVELLY SAND --FILL--	1	X	1	2 3 3	NP	6				X	11	9 6 6	NP	17
661.3	Stiff, black and brown CLAY --FILL--	2	X	2	2 3 4	1.23 B	29	636.7	Medium dense, brown gray SAND	30	X	12	5 2 9	NP	15
658.7	Loose, brown and gray SANDY LOAM --FILL--	3	X	3	1 2 2	NP	20	633.2	Medium dense to dense, gray SILT	35	X	13	22 18 13	NP	16
656.6	Medium stiff to very stiff, brown and gray SILTY CLAY, trace gravel	4	X	4	2 3 4	1.48 B	19				X	14	13 14 14	NP	21
		5	X	5	3 6 8	0.66 B	22								
		6	X	6	3 7 8	3.28 B	17								
		7	X	7	3 4 5	1.97 B	18								
		8	X	8	3 3 4	1.23 B	18								
643.7	Loose, brown gray GRAVELLY SAND	9	X	9	2 4 4	NP	9								
		10	X	10	3 3 5	NP	26								
GENERAL NOTES								WATER LEVEL DATA							
Begin Drilling 11-19-2008				Complete Drilling 11-19-2008				While Drilling ∇ 20.50 ft							
Drilling Contractor WTS				Drill Rig Mobil B-57 TMR				At Completion of Drilling ∇ 21.00 ft							
Driller K&J				Logger F.B.				Checked by N.D.				Time After Drilling NA			
Drilling Method 3.25" HSA; Mobile Automatic Hammer								Depth to Water ∇ NA				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

Wang Engineering, INC.
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 Environmental Engineers
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 Lombard, IL 60148
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 Fax: 630 953-9938

BORING LOG BC-02

Page 1 of 1

WEI Job No.: 563-02-01

Client: **Lonco, Incorporated**
 Project: **US Route 30 Culvert over Unnamed Creek**
 Location: **NW 1/4, Sec. 29, T37N, R9E, Will County**

Datum: NGVD
 Elevation: 663.70 ft
 North: 1818484.37 ft
 East: 1010835.45 ft
 Station:
 Offset:

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
663.1	7-inch thick ASPHALT --PAVEMENT--														
	Loose, brown SANDY LOAM --FILL--	1	X	1	3 3 4	NP	11	638.2	Medium dense to dense, gray SAND, trace gravel	11	X	11	14 11 9	NP	18
661.2	Stiff, brown and gray CLAY --FILL--	2	X	2	1 4 5	1.00 P	24				X	12	4 12 26	NP	18
		3	X	3	1 2 4	1.31 B	28	632.7	Medium dense to dense, gray SILT	35	X	13	8 18 27	NP	14
656.7	Stiff to very stiff, gray SILTY CLAY	4	X	4	4 5 7						X	14	7 7 9	NP	
		5	X	5	18 50/3	NP		627.2	Boring terminated at 36.50 ft.						
		6	X	6	24 21 8	3.12 B	16								
		7	X	7	15 7 9	3.50 B	15								
		8	X	8	11 13 10	3.50 B	14								
643.7	Loose to medium dense, SANDY GRAVEL	9	X	9	6 6 7	NP	15								
		10	X	10	1 2 3	NP	13								
GENERAL NOTES								WATER LEVEL DATA							
Begin Drilling 11-19-2008				Complete Drilling 11-19-2008				While Drilling ∇ 20.00 ft							
Drilling Contractor WTS				Drill Rig Mobil B-57 TMR				At Completion of Drilling ∇ 19.50 ft							
Driller K&J				Logger F.B.				Checked by N.D.				Time After Drilling NA			
Drilling Method 3.25" HSA; Mobile Automatic Hammer								Depth to Water ∇ NA				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

LONGCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST, SUITE 222
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

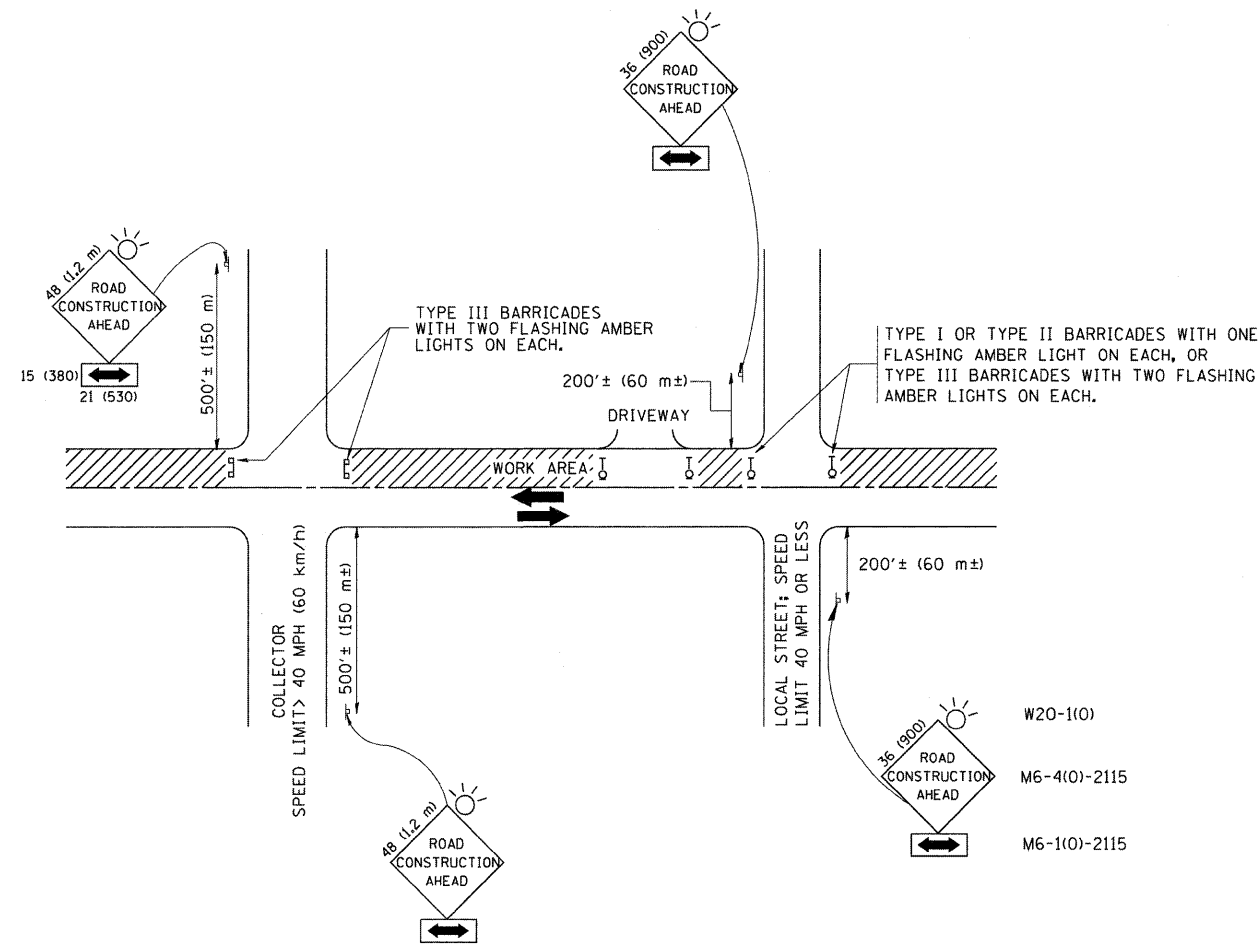
DESIGNED - MJY	REVISED -
DRAWN - ST	REVISED -
CHECKED - MJY	REVISED -
DATE - 01/16/2009	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOG
 US ROUTE 30

SCALE: NONE SHEET NO. 18 OF 20 SHEETS STA. 267+35 TO STA. 267+83

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	18
D-91-215-09		CONTRACT NO. 60F69		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

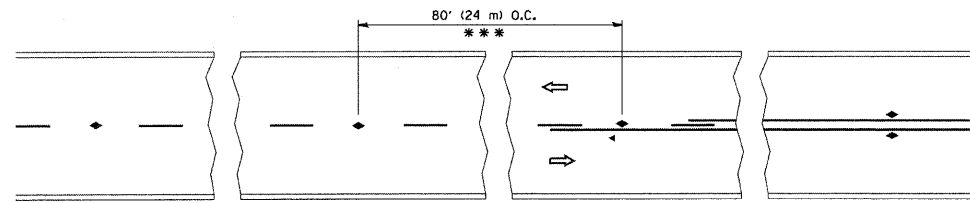
- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (Inches) unless otherwise shown.

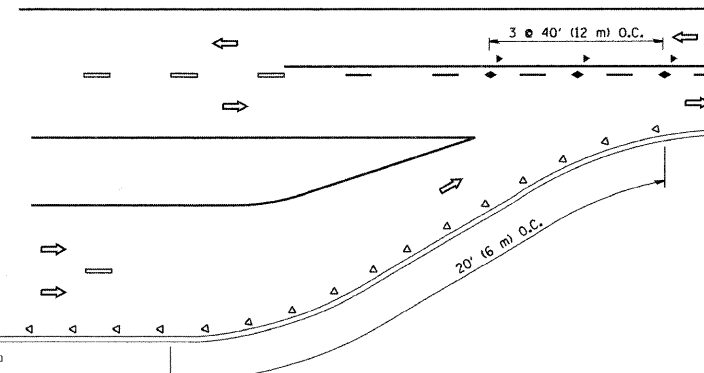
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DRAWN - ST	REVISED -
CHECKED - MJY	REVISED -
DATE - 01/16/2009	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	15 T-1	WILL	20	19
D-91-215-09			CONTRACT NO. 60F69	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

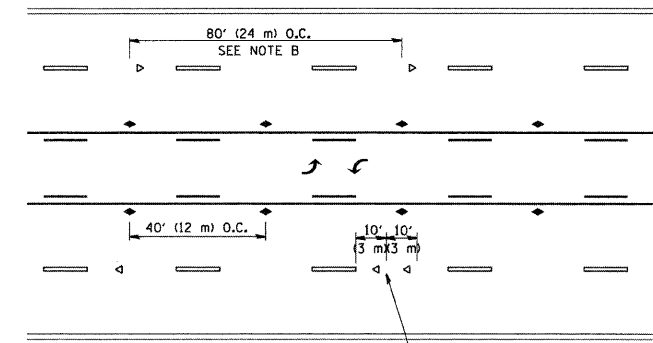


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

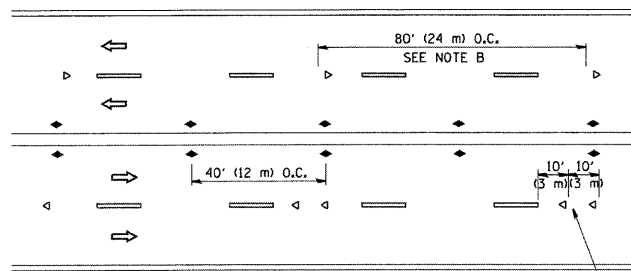
TWO-LANE/TWO-WAY



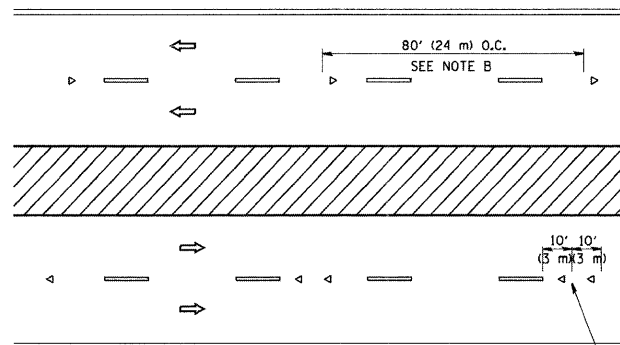
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

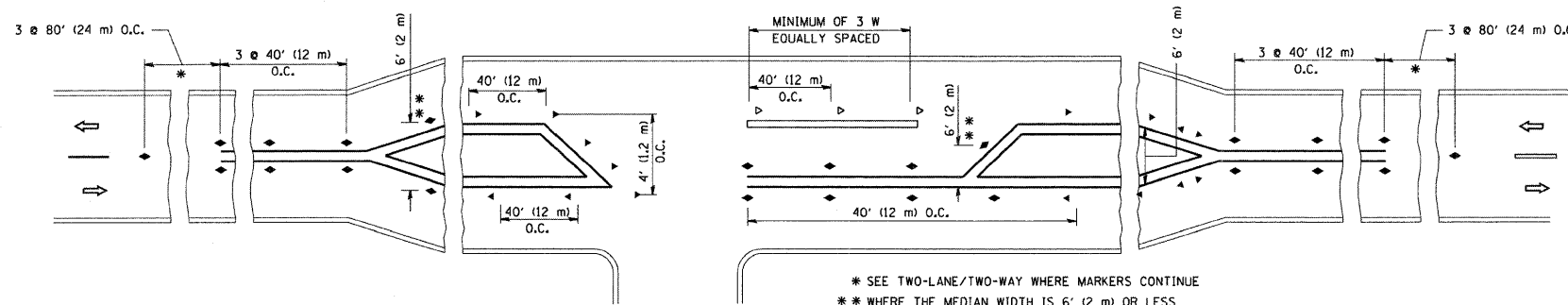
- YELLOW STRIPE
- WHITE STRIPE
- ◄ ONE-WAY AMBER MARKER
- ◄ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.